Access DB# 236231

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Sin J. Lee Examiner #: 76060 Date: 9-4-'07
Art Unit: 1752 Phone Number 30 2-1333 Serial Number: 10/522,036
Mail Box and Bldg/Room Location: 9C15 (Rem) Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Plz. See Bib.

Inventors (please provide full names): _____

_____

Earliest Priority Filing Date: _____

***For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.**

Please search for a photoacid generator of formula (ii) or (iii) of Cl. #1

****

STAFF USE ONLY

Searcher: EJ
Searcher Phone #: _____
Searcher Location: _____
Date Searcher Picked Up: _____
Date Completed: 9-13-07
Searcher Prep & Review Time: _____
Clerical Prep Time: _____
Online Time: _____

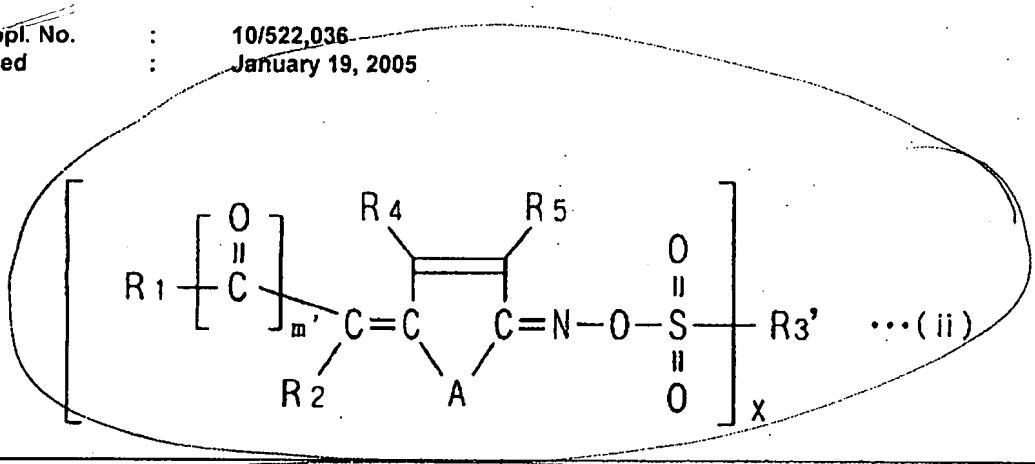
Type of Search

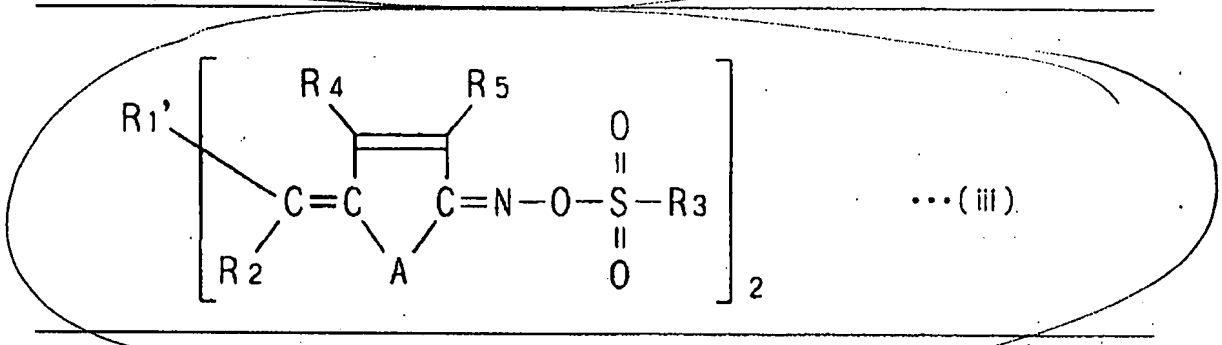
NA Sequence (#)_____
AA Sequence (#)_____
Structure (#) _____
Bibliographic _____
Litigation _____
Fulltext _____
Patent Family _____
Other _____

Vendors and cost where applicable

STN _____
Dialog _____
Questel/Orbit _____
Dr.Link _____
Lexis/Nexis _____
Sequence Systems _____
WWW/Internet _____
Other (specify) _____

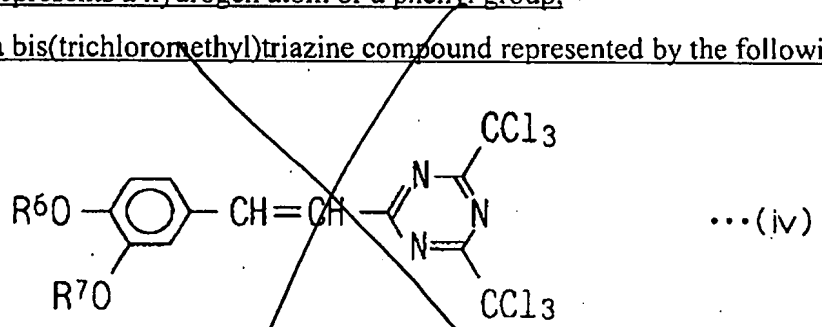
PTO-1590 (8-01)





wherein m' represents 0 or 1; X represents 1 or 2; R_1 represents a phenyl group which may be substituted with one or more alkyl groups having 1 to 12 carbon atoms, a heteroaryl group, or an alkoxycarbonyl group having 2 to 6 carbon atoms, a phenoxycarbonyl group or CN when m' is 0; R_1' represents an alkylene group having 2 to 12 carbon atoms; R_2 represents a phenyl group which may be substituted with one or more alkyl groups having 1 to 12 carbon atoms, a heteroaryl group, or an alkoxycarbonyl group having 2 to 6 carbon atoms, phenoxycarbonyl group or CN when m' is 0; R_3 represents an alkyl group having 1 to 18 carbon atoms; R_3' represents an alkyl group having 1 to 18 carbon atoms when X = 1, or an alkylene group having 2 to 12 carbon atoms or a phenylene group when X = 2; R_4 and R_5 each independently represents a hydrogen atom, halogen, or an alkyl group having 1 to 6 carbon atoms; A represents S, O or NR_6; and R_6 represents a hydrogen atom or a phenyl group,

a bis(trichloromethyl)triazine compound represented by the following formula (iv):

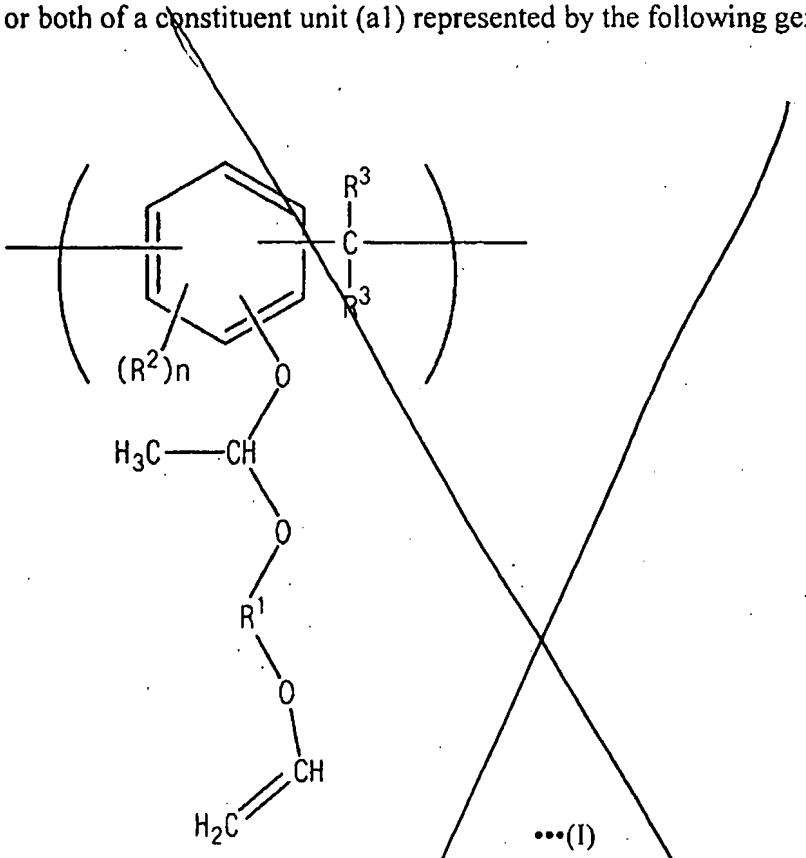


wherein R^6 and R^7 each represents alkyl group having 1 to 3 carbon atoms.

AMENDMENTS TO THE CLAIMS

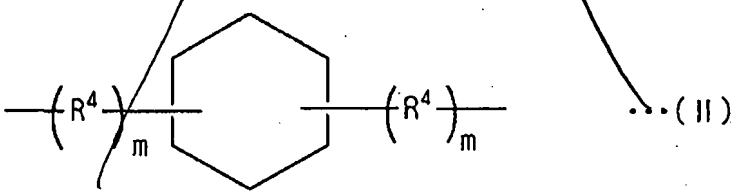
1. **(Currently amended)** A chemical amplification type positive photoresist composition prepared by dissolving:

(A) a slightly alkali-soluble or alkali-insoluble novolak resin having a property that solubility in an aqueous alkali solution is enhanced in the presence of an acid, comprising either or both of a constituent unit (a1) represented by the following general formula (I):



...(I)

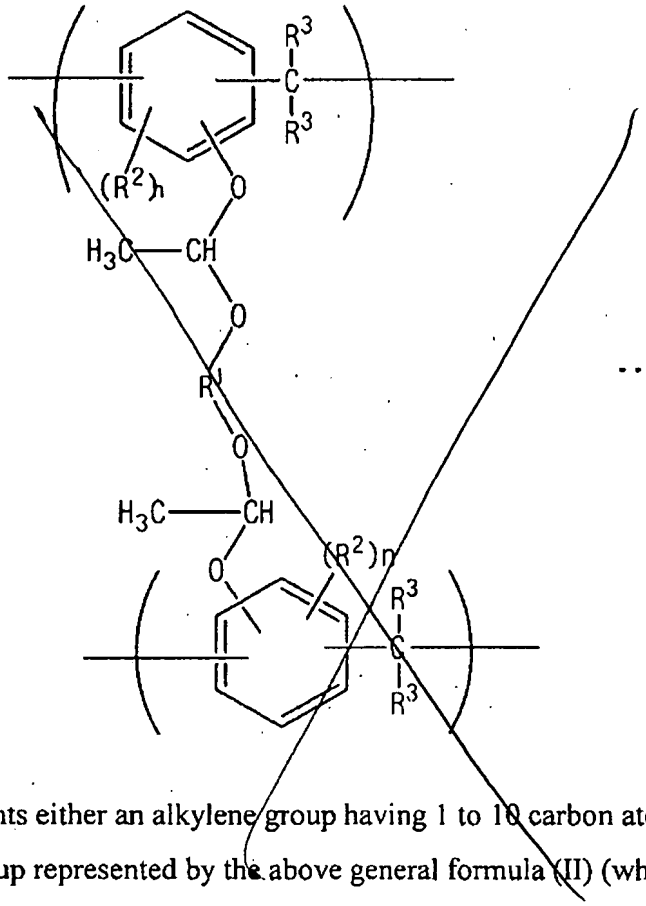
wherein R^1 represents either an alkylene group having 1 to 10 carbon atoms which may have a substituent or a group represented by the following general formula (II):



...(II)

(wherein R^4 represents an alkylene group having 1 to 10 carbon atoms which may have a substituent and m represents 0 or 1), the alkylene group may have an oxygen bond (ether bond) in the main chain, R^2 and R^3 each independently represents a hydrogen atom or an alkyl group

having 1 to 3 carbon atoms, and n represents an integer of 1 to 3, and an intermolecular crosslinked moiety (a2) represented by the following general formula (III):



---(III)

wherein R^1 represents either an alkylene group having 1 to 10 carbon atoms which may have a substituent or a group represented by the above general formula (II) (wherein R^4 represents an alkylene group having 1 to 10 carbon atoms which may have a substituent and m represents 0 or 1), the alkylene group may have an oxygen bond (ether bond) in the main chain, R^2 and R^3 each independently represents hydrogen atom or alkyl group having 1 to 3 carbon atoms, and n represents an integer of 1 to 3; and

(B) a compound generating an acid under irradiation, wherein said compound is represented by the following general formulas (ii) and (iii):

```
=> FILE REG
FILE 'REGISTRY' ENTERED AT 12:41:18 ON 13 SEP 2007
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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=> D HIS

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L3             49 S L1 FUL
                  SAV L3 LEE036/A

     FILE 'CAOLD' ENTERED AT 12:40:02 ON 13 SEP 2007
L4              0 S L3

     FILE 'ZCA' ENTERED AT 12:40:09 ON 13 SEP 2007
L5             68 S L3
L6             26 S 1840-2003/PY,PRY AND L5

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=> D L3 QUE STAT
L1                STR
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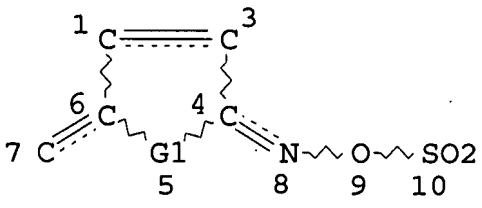


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VAR G1=N/O/S
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   9

STEREO ATTRIBUTES: NONE
L3             49 SEA FILE=REGISTRY SSS FUL L1
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100.0% PROCESSED 58 ITERATIONS 49 ANSWERS
SEARCH TIME: 00.00.01

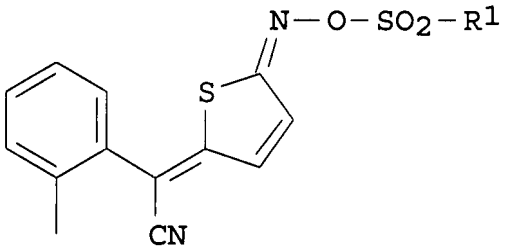
=> FILE ZCA
FILE 'ZCA' ENTERED AT 12:41:27 ON 13 SEP 2007

=> D L6 1-26 BIB ABS HITSTR HITRN

L6 ANSWER 1 OF 26 ZCA COPYRIGHT 2007 ACS on STN
AN 146:283865 ZCA
TI Chemically amplified positive resist composition comprising two kinds of photoacid generator having high absorption at 248 nm and acid-labile resin which insoluble or hardly soluble in alkali aqueous solution but becomes soluble by action of acid
IN Kim, Sang Tae; Takahashi, Kenji; Sung, Shi Jin; Yang, Don Sik; Park, Han Woo
PA Dongwoo Fine-Chem Co., Ltd., S. Korea
SO Repub. Korean Kongkae Taeho Kongbo, No pp. given
CODEN: KRXXA7
DT Patent
LA Korean
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	KR 2005061640	A	20050623	KR 2003-92853	200312 18
PRAI	KR 2003-92853		20031218 <--	<--	

GI



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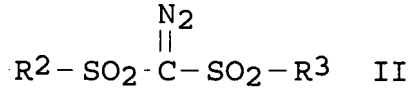
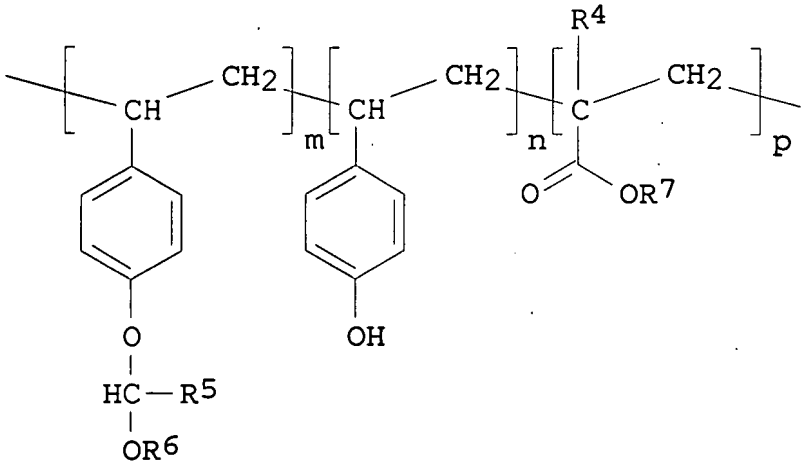


II

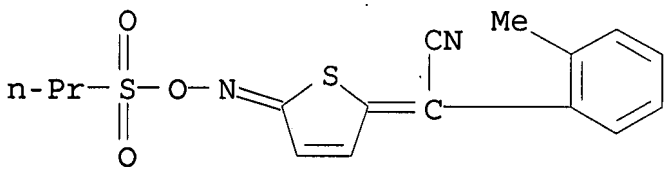


III

AB Provided is a chem. amplified pos. resist compn. which has satisfactory sensitivity, resoln., residual film rate and coating property and is improved in profile and depth of focus in case of the formation of a pattern under the thick film condition. The chem. amplified pos. resist compn. comprises two photoacid generators represented by the formula [I and II where R1 is a C1-C10 linear, branched or cyclic alkyl group, a fluoroalkyl group or a C6-C11 aryl group optionally substituted with a halogen atom; R2 and R3 are a C3-C8 linear, branched or cyclic alkyl group]; and a resin which is insol. or hardly sol. in an alkali aq. soln. but becomes sol. after the dissocn. of an acid-labile group by the action of an acid and is represented by the formula [III where R4 is H of CH3; R5 is H or a C1-C6 linear, branched or cyclic alkyl group; R6 is a C1-C10 linear, branched or cyclic alkyl group; m, n and p are independently a natural no. and satisfy the conditions of $0.10 <= (a+c)/(m+n+p) <= 0.50$ or $0.01 <= c/(m+n+p) <= 0.40$; and R7 is a C1-C10 linear, branched or cyclic alkyl group].

IT **282713-83-1**
(chem. amplified pos. resist compn. comprising two kinds of photoacid generators and acid-labile resin)

RN 282713-83-1 ZCA
CN Benzeneacetonitrile, 2-methyl-α-[5-[[(propylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (CA INDEX NAME)

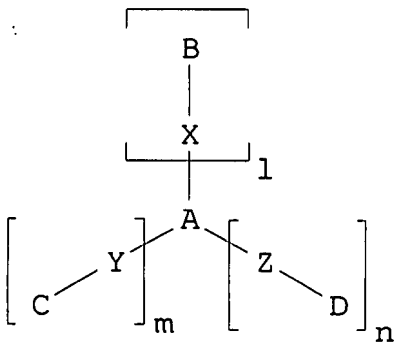


IT **282713-83-1**
(chem. amplified pos. resist compn. comprising two kinds of photoacid generators and acid-labile resin)

L6 ANSWER 2 OF 26 ZCA COPYRIGHT 2007 ACS on STN
AN 142:345148 ZCA
TI Photoresist, its purification and photoresist composition showing improved sensitivity, contrast, and line-edge-roughness to extreme UV
IN Ueda, Mitsuru; Ishii, Hirohisa
PA Idemitsu Kosan Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 32 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005075767	A	20050324	JP 2003-307443	20030829

PRAI JP 2003-307443 20030829
OS MARPAT 142:345148
GI



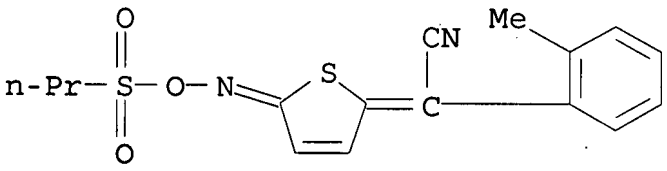
I

AB The title photoresist comprises an extreme UV light-reactive org. compd. represented by I (A = C1-50-aliph., C6-50-arom., etc.; B, C, D = extreme UV light-reactive group-contg. C1-50-aliph., C6-50-arom., etc.; X, Y, Z = single bond, ether linkage; l, m, n = 0-5) and ≤10 ppm of basic impurities. The chem. amplified photoresist compn. is sensitive to extreme UV and electron beam.

IT **282713-83-1**
(photoacid generator; photoresist, its purifn. and photoresist compn. showing improved sensitivity, contrast, and line-edge-roughness to extreme UV)

RN 282713-83-1 ZCA

CN Benzeneacetonitrile, 2-methyl-α-[5-[[(propylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (CA INDEX NAME)



IT **282713-83-1**
(photoacid generator; photoresist, its purifn. and photoresist compn. showing improved sensitivity, contrast, and line-edge-roughness to extreme UV)

L6 ANSWER 3 OF 26 ZCA COPYRIGHT 2007 ACS on STN

AN 142:45917 ZCA

TI A chemically amplified photoresist compositions for extreme-UV lithography

IN Henderson, Clifford L.; Hoskins, Trevor; Berger, Cody M.

PA Georgia Tech Research Corporation, USA

SO U.S. Pat. Appl. Publ., 13 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004248034	A1	20041209	US 2004-862759	20040607 <--
US 7223518	B2	20070529		
WO 2004108769	A2	~~20041216~~	WO 2004-US17865	20040607 <--
WO 2004108769	A3	~~20061019~~		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

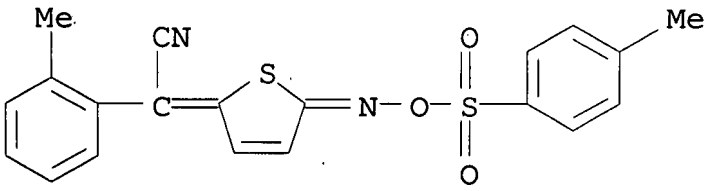
PRAI US 2003-476432P P 20030606 <--

AB Thus, a photoresist compn. for extreme-UV lithog. includes a polymer that is transparent at spectral range 193 and 157 nm, and an onium salt-based photoacid generator that has substantial absorption in this spectral region. The compn. has a ratio of a first dissoln. (before light exposure) rate and a second dissoln. (after light exposure) rate > 1.1.

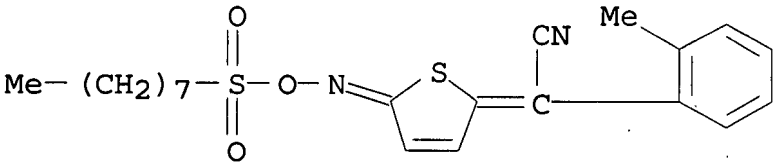
IT **219651-32-8 219651-37-3 282713-83-1**
(photoacid generator; chem. amplified photoresist compns. for extreme-UV lithog.)

RN 219651-32-8 ZCA

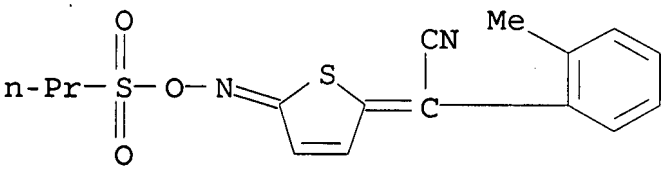
CN Benzeneacetonitrile, 2-methyl-α-[5-[[[(4-methylphenyl)sulfonyl]oxy]imino]-2(5H)-thienylidene]- (CA INDEX NAME)



RN 219651-37-3 ZCA
CN Benzeneacetonitrile, 2-methyl-α-[5-[[(octylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (CA INDEX NAME)



RN 282713-83-1 ZCA
CN Benzeneacetonitrile, 2-methyl-α-[5-[[(propylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (CA INDEX NAME)



IT **219651-32-8 219651-37-3 282713-83-1**
(photoacid generator; chem. amplified photoresist compns. for extreme-UV lithog.)
RE.CNT 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 4 OF 26 ZCA COPYRIGHT 2007 ACS on STN
AN 141:417940 ZCA
TI Negative-working alkali-developable polyamic acid composition
IN Ueda, Mitsuru; Shibazaki, Yuji; Watanabe, Yasushi
PA JSR Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

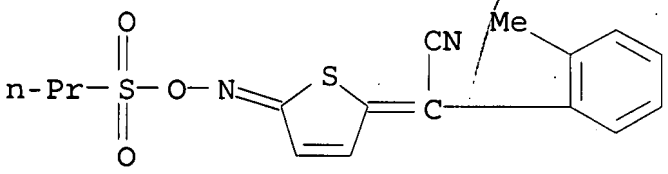
PI	JP 2004325540	A	20041118	JP 2003-116661	200304 22
PRAI	JP 2003-116661		20030422 <--		

AB The compn. contains (a) a polyamic acid, (b) a photoacid generator, (c) a crosslinking agent, and (d) an org. solvent. Clear neg. pattern with good heat resistance is obtained.

IT **282713-83-1**
(photoacid generator; neg.-working alkali-developable polyamic acid compn. contg. polyamic acid)

RN 282713-83-1 ZCA

CN Benzeneacetonitrile, 2-methyl-α-[5-[[(propylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (CA INDEX NAME)



IT **282713-83-1**
(photoacid generator; neg.-working alkali-developable polyamic acid compn. contg. polyamic acid)

L6 ANSWER 5 OF 26 ZCA COPYRIGHT 2007 ACS on STN

AN 141:403470 ZCA

TI Chemical amplification positive-working photoresist composition, its thick laminate, formation of thick resist pattern and connection terminal

IN Okui, Toshiki; Misumi, Koichi

PA Tokyo Ohka Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 23 pp.
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004309777	A	20041104	JP 2003-102957	200304 07
PRAI	JP 2003-102957		20030407 <--		

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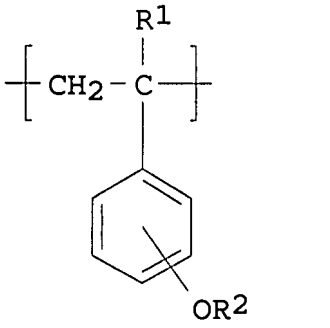

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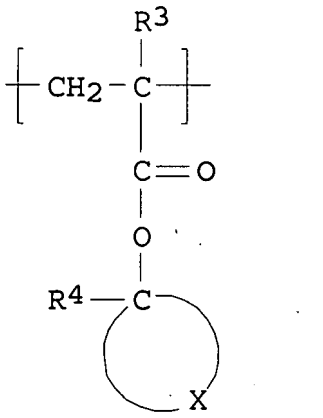


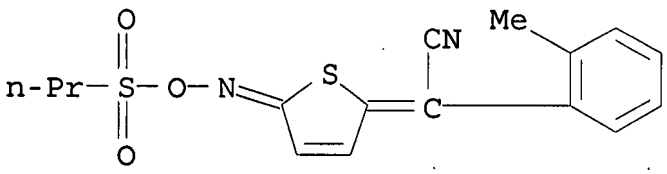
II

AB The compn. contains (A) a compd. generating an acid by the action of actinic ray or irradn. and (B) a resin compn., whose soly. to alkali increases by the action of the acid, contg. (b1) a resin with structural unit I (R1 = H, Me; R2 = acid labile group) and (b2) a resin with structural unit II (R3 = H, Me; R4 = C1-4 alkyl; X = atoms to form 5- to 20-membered hydrocarbon ring). The laminate comprises a support and 10-150 μm-thick layer of the photoresist. The thick resist pattern is manufd. by (1) forming the photoresist laminate, (2) selectively irradiating the actinic ray or radiation, and (3) developing the resist. Conductive connection terminal is formed on the non-resist area of the pattern. The compn. shows high resoln., good developability, and plating resistance.

IT **282713-83-1**
(acid generator; chem. amplification thick photoresist compn. for connection terminal formation)

RN 282713-83-1 ZCA

CN Benzeneacetonitrile, 2-methyl-α-[5-[[(propylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (CA INDEX NAME)



IT **282713-83-1**
(acid generator; chem. amplification thick photoresist compn. for connection terminal formation)

L6 ANSWER 6 OF 26 ZCA COPYRIGHT 2007 ACS on STN
AN 141:386395 ZCA
TI Chemical amplification positive-working photoresist composition, its thick laminate, formation of thick resist pattern and connection terminal
IN Okui, Toshiki; Misumi, Koichi
PA Tokyo Ohka Kogyo Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 23 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2004309775	A	20041104	JP 2003-102955	20030407
PRAI JP 2003-102955		20030407		

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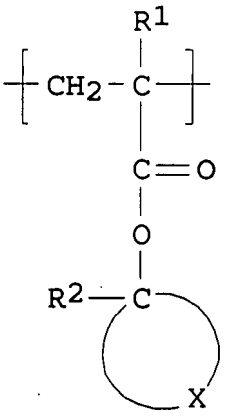
GI



I

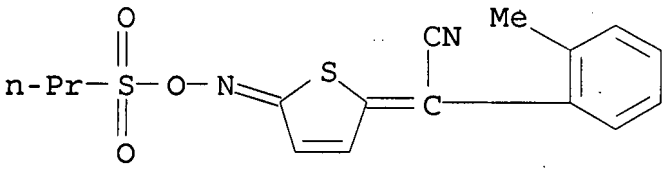
AB The compn. contains (A) a compd. generating an acid by the action of actinic ray or irradn., (B) a resin with structural unit I (R1 = H, Me; R2 = lower alkyl; X = atoms to form 5- to 20-membered hydrocarbon ring) and whose soly. to alkali increases by the action of the acid, and (C) an alkali-sol. resin. The laminate comprises a support and 10-150 μm-thick layer of the photoresist. The thick resist pattern is manufd. by (1) forming the photoresist laminate,

(2) selectively irradiating the actinic ray or radiation, and (3) developing the resist. Connection terminal is formed on the non-resist area of the pattern. The compn. shows high contrast, gives clear patterns, and good plating resistance.

IT **282713-83-1**
(acid generator; chem. amplification thick photoresist compn. for manuf. of connection terminal)

RN 282713-83-1 ZCA

CN Benzeneacetonitrile, 2-methyl-α-[5-[[(propylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (CA INDEX NAME)



IT **282713-83-1**
(acid generator; chem. amplification thick photoresist compn. for manuf. of connection terminal)

L6 ANSWER 7 OF 26 ZCA COPYRIGHT 2007 ACS on STN

AN 141:372780 ZCA

TI Chemical amplification positive-working photoresist composition, its thick laminate, formation of thick resist pattern and connection terminal

IN Okui, Toshiki; Misumi, Koichi

PA Tokyo Ohka Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 23 pp.
CODEN: JKXXAF

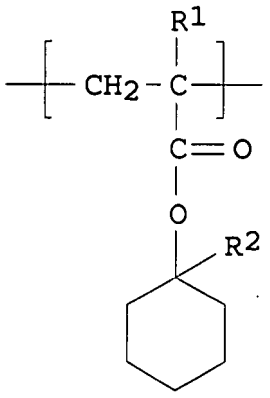
DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004309778	A	20041104	JP 2003-102958	20030407
PRAI	JP 2003-102958		20030407	<--	<--

GI



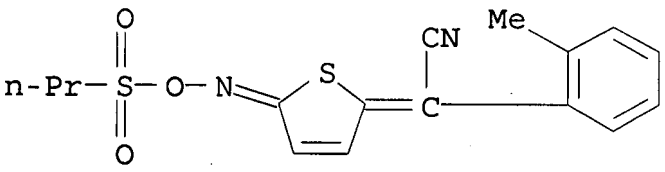
I

AB The compn. contains (A) a compd. generating an acid by the action of actinic ray or irradn. and (B) a resin with structural unit I (R1 = H, Me; R2 = lower alkyl), whose soly. to alkali increases by the action of the acid. The laminate comprises a support and 10-150 μm-thick layer of the photoresist. The thick resist pattern is manufd. by (1) forming the photoresist laminate, (2) selectively irradiating the actinic ray or radiation, and (3) developing. Conductive connection terminal is formed on the non-resist area of the pattern. The compn. shows high contrast, gives clear patterns, and good plating resistance.

IT **282713-83-1**
(acid generator; chem. amplification thick photoresist compn. for manuf. of connection terminal)

RN 282713-83-1 ZCA

CN Benzeneacetonitrile, 2-methyl-α-[5-[[(propylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (CA INDEX NAME)



IT **282713-83-1**
(acid generator; chem. amplification thick photoresist compn. for manuf. of connection terminal)

L6 ANSWER 8 OF 26 ZCA COPYRIGHT 2007 ACS on STN

AN 141:131285 ZCA

TI Photoresists material and method for pattern formation using the same

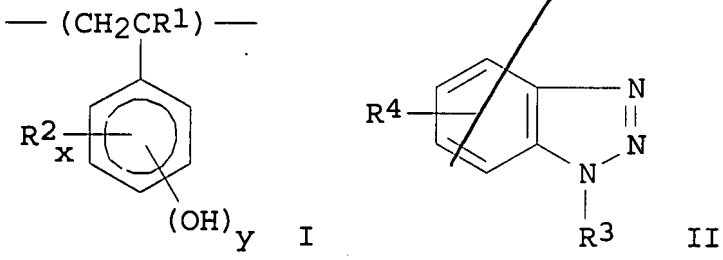
IN Kato, Hideto; Noda, Kazumi
PA Shin-Etsu Chemical Industry Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 17 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

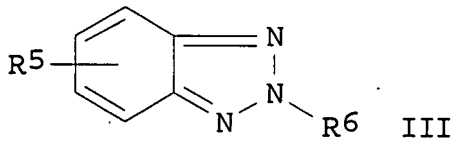
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004198944	A	20040715	JP 2002-370106	20021220

PRAI JP 2002-370106 20021220 <--
OS MARPAT 141:131285

GI



I II



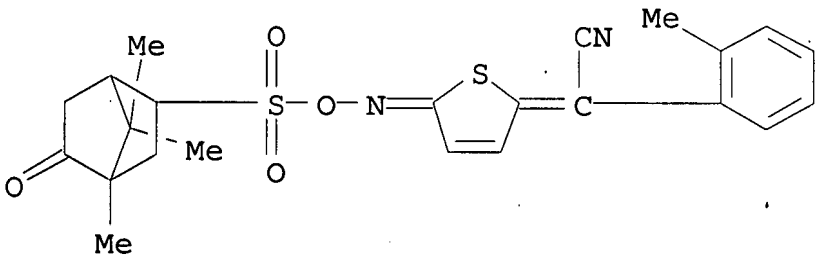
III

AB The title material contains a polymer, 0.6-19 parts of an acid generator, and a 0.01-10 parts of an benzotriazole deriv. based on 100 parts of the polymer and has 30-60 % of the total content of the above components, wherein the polymer has 3,000-300,000 wt. av. mol. wt. and repeating unit I(R1 = H, methyl; R2 = C1-8 alkyl; x= integer ≥0; yr= integer >0; x+y≤5), wherein benzotriazole deriv. is chosen from: (5-(4-methlphenyl)sulfonyloxyimino-5H-thiophen-2-ylidene)-(2-methylphenyl)acetonitrile; (5-propylsulfonyloxyimino-5H-thiophene-2-ylidene)-(2-methylphenyl)acetonitrile; (5-camphorsulfonyloxyimino-5H-

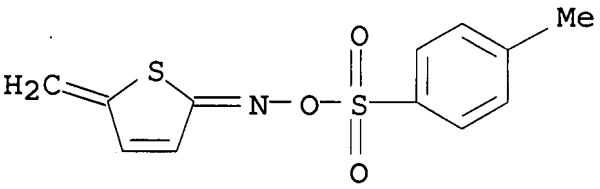
thiophen-2-ylidene)-(2-methylphenyl)acetonitrile;
α-(9-camphorsulfonyloxyimino)-4-methoxy-benzoacetonitrile;
α-[[[(4-methoxyphenyl)sulfonyl]oxy]imino]-benzoacetonitrile;
4-methoxy-α-[[[(4-methylphenyl)sulfonyl]oxy]imino]-
benzoacetonitrile, and wherein the benzotriazole deriv. has general structure II(R3 = H, OH, alkyl, ester, Ph, etc.; R4 = H, halo, OH, alkyl, alkoxy) or III(R6 = H, OH, alkyl, phenyl; R5 = H, halo, OH, alkyl, alkoxy). The compn. provides photoresists generating high resoln. pattern on a metal substrate.

IT **722479-59-6 722479-60-9**
(photoresists material and method for pattern formation using same)

RN 722479-59-6 ZCA
CN Benzeneacetonitrile, 2-methyl-α-[5-[[[(4,7,7-trimethyl-5-oxobicyclo[2.2.1]hept-2-yl)sulfonyl]oxy]imino]-2(5H)-thienylidene]-(9CI) (CA INDEX NAME)



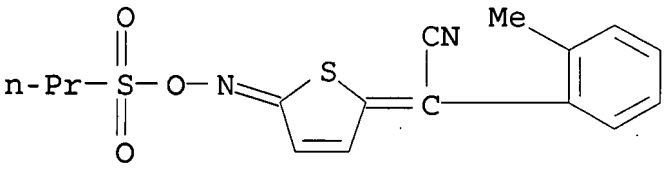
RN 722479-60-9 ZCA
CN 2(5H)-Thiophenone, 5-methylene-, O-[(4-methylphenyl)sulfonyl]oxime (9CI) (CA INDEX NAME)



IT **722479-59-6 722479-60-9**
(photoresists material and method for pattern formation using same)

L6 ANSWER 9 OF 26 ZCA COPYRIGHT 2007 ACS on STN
AN 141:44772 ZCA
TI A new positive-working alkaline developable photoresist based on partially O-tert-butoxycarbonylmethylated-tetra-C-methylcalix[4]resorcinarene and a photoacid generator

AU Iimori, H.; Shibasaki, Y.; Ueda, M.; Ishii, H.
CS Department of Organic and Polymeric Materials, Graduate School of Science and Engineering, Tokyo Institute of Technology, Tokyo, 152-8552, Japan
SO Journal of Photopolymer Science and Technology (**2003**), 16(5), 685-690
CODEN: JSTEEW; ISSN: 0914-9244
PB Technical Association of Photopolymers, Japan
DT Journal
LA English
AB A new pos.-working low-mol.-wt. photoresist has been developed. The photoresist consisted of the matrix, tetra-C-methylcalix[4]resorcinarene (p-t-BM-C4-R) in which the OH groups were protected with tert-butoxycarbonylmethyl groups (protecting ratio: 27-60%), and a photoacid generator (PAG), 5-(propylsulfonyloxyimino-5H-thiophen-2-ylidene)-2-methylphenylacetonitrile (PTMA). The p-t-BM-C4-R (protecting ratio: 40%) contg. PTMA (2 wt%) showed a high sensitivity (10 mJ/cm2) and a contrast 11 after the irradn. with g-line, post-exposure baking at 120°C at 60 s, and developing with 2.38 wt% tetramethylammonium hydroxide aq. soln. (TMAHaq) at 20°C for 10 s.
IT **282713-83-1**
(pos.-working alk. developable photoresist based on partially O-tert-butoxycarbonylmethylatedtetra-C-methylcalix[4]resorcinarene)
RN 282713-83-1 ZCA
CN Benzeneacetonitrile, 2-methyl-α-[5-[[(propylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (CA INDEX NAME)



IT **282713-83-1**
(pos.-working alk. developable photoresist based on partially O-tert-butoxycarbonylmethylatedtetra-C-methylcalix[4]resorcinarene)
RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 10 OF 26 ZCA COPYRIGHT 2007 ACS on STN
AN 140:383110 ZCA
TI Chemically amplified positive photosensitive resin composition
IN Nishiwaki, Yoshinori; Makii, Toshimichi

PA Clariant International Ltd., Switz.; Clariant (Japan) K. K.
SO PCT Int. Appl., 33 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

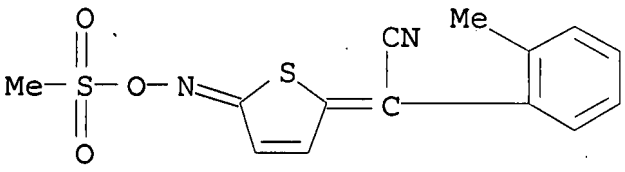
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004038506	A1	20040506	WO 2003-JP13233	20031016 <--
	W: CN, JP, KR, US RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR				
	EP 1562077	A1	20050810	EP 2003-756638	20031016 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK				
	CN 1705914	A	20051207	CN 2003-80101785	20031016 <--
	US 2005271972	A1	20051208	US 2005-532364	20050420 <--
	US 7255972	B2	20070814		
PRAI	JP 2002-308089	A	20021023 <--		
	WO 2003-JP13233	W	20031016 <--		

AB A chem. amplified pos. photosensitive resin compn. capable of forming thick or extra thick resist patterns, which comprises (A) an alkali-sol. novolac resin, (B) an alkali-sol. acrylic resin, (C) an acetal compd., and (D) an acid generator and which are suitable for the formation of thick resist patterns necessary to the formation of magnetic poles of magnetic heads or bumps. The acetal compd. is preferably a polycondensate comprising repeating units represented by the general formula -O(R)HO(C2H4O)- [R = satd. alkyl having 1 to 20 carbon atoms; n = 1-10].

IT **210432-74-9**, 5-Methylsulfonyloxyimino-5H-thiophene-2-ylidene-2-methylphenylacetonitrile
(acid generator; chem. amplified pos. photosensitive resin compn. suitable for magnetic head fabrication and for semiconductor device packaging)

RN 210432-74-9 ZCA

CN Benzeneacetonitrile, 2-methyl-α-[5-[[(methylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (9CI) (CA INDEX NAME)



IT **210432-74-9**, 5-Methylsulfonyloxyimino-5H-thiophene-2-ylidene-2-methylphenylacetonitrile
(acid generator; chem. amplified pos. photosensitive resin compn. suitable for magnetic head fabrication and for semiconductor device packaging)

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 11 OF 26 ZCA COPYRIGHT 2007 ACS on STN
AN 140:207466 ZCA
TI Photoacid generators, chemically amplified positive resist compositions, and patterning process
IN Maeda, Kazunori; Ohsawa, Youichi; Watanabe, Satoshi
PA Japan
SO U.S. Pat. Appl. Publ., 30 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004033440	A1	20040219	US 2003-636654	20030808
JP 2004133393	A	20040430	JP 2003-205698	20030804

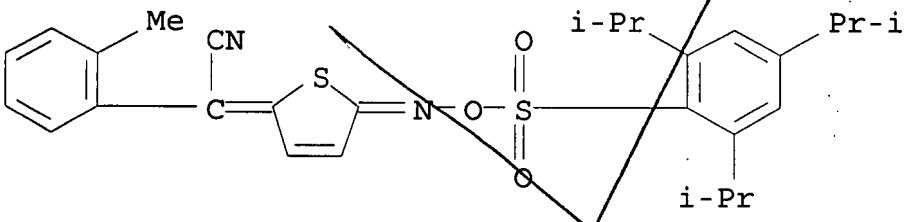
PRAI JP 2002-233510 A 20020809 <--
OS MARPAT 140:207466
AB Photoacid generators capable of generating 2,4,6-triisopropylbenzenesulfonic acid upon exposure to actinic radiation are suited for use in chem. amplified pos. resist compns. Due to the low diffusion of 2,4,6-triisopropylbenzenesulfonic acid, the compns. have many advantages including improved resoln., improved

focus latitude, and minimized line width variation or shape degrdn. even on long-term PED.

IT **660845-72-7P**
(photoacid generators and chem. amplified pos. resist compns. for patterning process)

RN 660845-72-7 ZCA

CN Benzeneacetonitrile, 2-methyl-α-[5-[[[[2,4,6-tris(1-methylethyl)phenyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]- (9CI) (CA INDEX NAME)

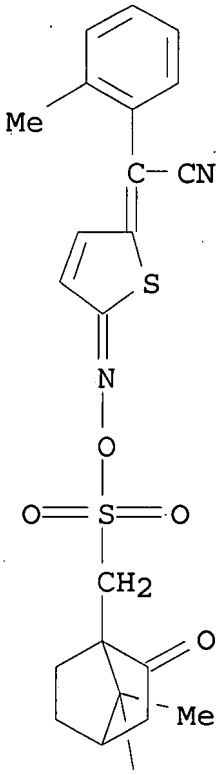


IT **219651-50-0**
(photoacid generators and chem. amplified pos. resist compns. for patterning process)

RN 219651-50-0 ZCA

CN Benzeneacetonitrile, α-[5-[[[[(7,7-dimethyl-2-oxobicyclo[2.2.1]hept-1-yl)methyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]-2-methyl- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

IT **660845-72-7P**
(photoacid generators and chem. amplified pos. resist compns. for patterning process)

IT **219651-50-0**
(photoacid generators and chem. amplified pos. resist compns. for patterning process)

L6 ANSWER 12 OF 26 ZCA COPYRIGHT 2007 ACS on STN
AN 140:102018 ZCA
TI Photoacid generators for chemically amplified resists and their use in resists and pattern formation
IN Osawa, Yoichi; Kobayashi, Katsuhiro; Takemura, Katsuya; Tsuchiya, Junji; Maeda, Kazuki

PA Shin-Etsu Chemical Industry Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 76 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004004551	A	20040108	JP 2003-27861	20030205
			<--	
PRAI JP 2002-80566	A	20020322	<--	

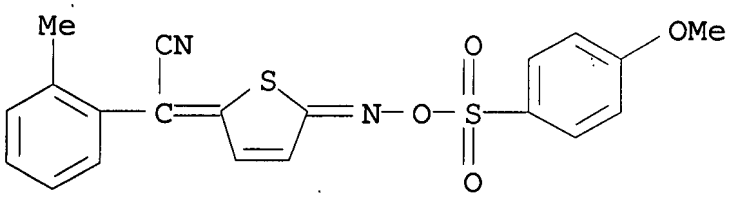
OS MARPAT 140:102018
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The photoacid generators are represented by I, pC(EWG):NOSO2C6H4-rR'rOn(CH2)mMe, q[C(EWG):NOSO2C6H4-rR'rOn(CH2)mMe]2, or II [R' = H, F, C1-4 alkyl, alkoxy; R = Cl, R'; n = 0, 1; m =3-11; r = 0-4; EWG = cyano, nitro, C1-3 perfluoroalkyl; p = C1-10 alkyl, C6-12 aryl; q = C1-10 alkylene, C6-18 arylene; G', G'' = S, CH:CH; G' and G'' are not S at the same time; G = H, p; two G may form ring]. Alternatively, the photoacid generators are O-arylsulfonyloximes and generate long-chain alkylbenzenesulfonic acids or alkoxybenzenesulfonic acids of HO3SC6H4-rR'rOn(CH2)mMe (R', n, m, and r are same as above) under irradn. with UV, far-UV, electron beam, x-ray, excimer laser, γ-ray, or synchrotron radiation. The claimed chem. amplified (pos.) resists contain the above photoacid generators and resins changing soly. to alkali development solns. by acids. Patterns are formed by applying the resists on substrates, heating, exposing through photomasks by ≤300 nm-wavelength high-energy beams or electron beams, optionally heating, and developing with solns.

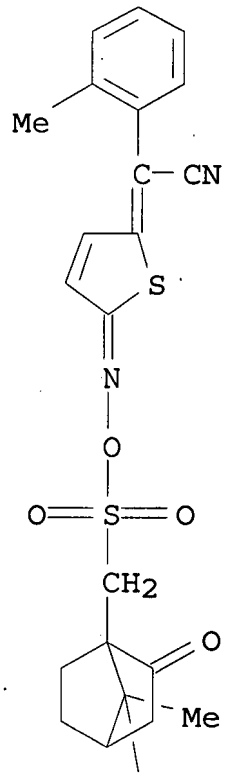
IT **219651-38-4P 219651-50-0P 642460-61-5P 642460-63-7P**
(photoacid generator; photoacid generators for chem. amplified resists and pattern formation with high-energy beams or electron beams)

RN 219651-38-4 ZCA
CN Benzeneacetonitrile, α-[5-[[[(4-methoxyphenyl)sulfonyl]oxy]imino]-2(5H)-thienylidene]-2-methyl- (9CI) (CA INDEX NAME)



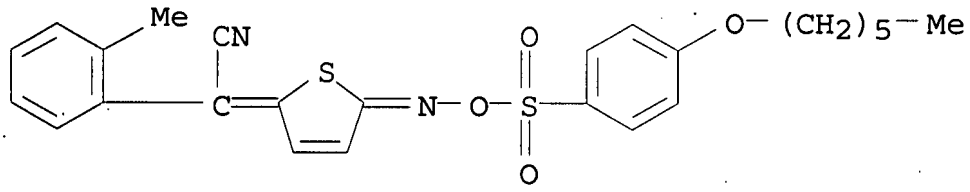
RN 219651-50-0 ZCA
CN Benzeneacetonitrile, α-[5-[[[[(7,7-dimethyl-2-oxobicyclo[2.2.1]hept-1-yl)methyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]-2-methyl- (9CI) (CA INDEX NAME)

PAGE 1-A

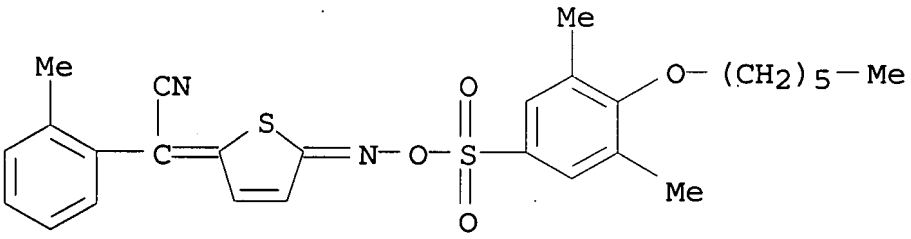


PAGE 2-A

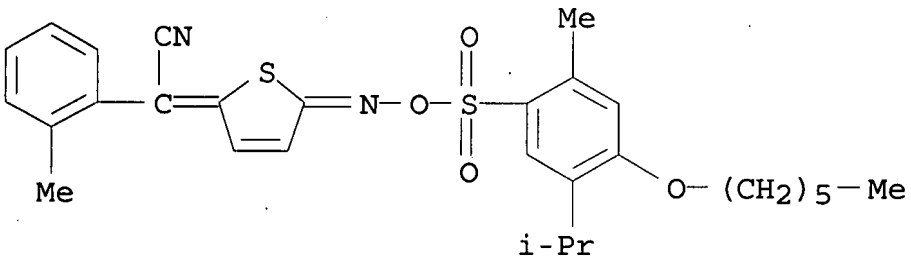
RN 642460-61-5 ZCA
CN Benzeneacetonitrile, α-[5-[[[[4-(hexyloxy)phenyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]-2-methyl- (9CI) (CA INDEX NAME)



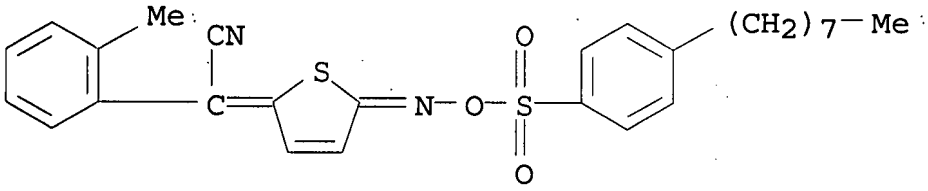
RN 642460-63-7 ZCA
CN Benzeneacetonitrile, α-[5-[[[[4-(hexyloxy)-3,5-dimethylphenyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]-2-methyl- (9CI) (CA INDEX NAME)



IT **642460-65-9P 642460-68-2P**
(photoacid generators for chem. amplified resists and pattern formation with high-energy beams or electron beams)
RN 642460-65-9 ZCA
CN Benzeneacetonitrile, α-[5-[[[[4-(hexyloxy)-2-methyl-5-(1-methylethyl)phenyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]-2-methyl- (9CI) (CA INDEX NAME)



RN 642460-68-2 ZCA
CN Benzeneacetonitrile, 2-methyl-α-[5-[[[(4-octylphenyl)sulfonyl]oxy]imino]-2(5H)-thienylidene]- (9CI) (CA INDEX NAME)



IT **219651-38-4P 219651-50-0P 642460-61-5P**
642460-63-7P
(photoacid generator; photoacid generators for chem. amplified resists and pattern formation with high-energy beams or electron beams)

IT **642460-65-9P 642460-68-2P**
(photoacid generators for chem. amplified resists and pattern formation with high-energy beams or electron beams)

L6 ANSWER 13 OF 26 ZCA COPYRIGHT 2007 ACS on STN
AN 140:84640 ZCA
TI Chemically amplified positive photoresist compositions with high sensitivity and resolution
IN Nanba, Katsuhiko; Nakanishi, Junji; Uetani, Yasunori
PA Sumitomo Chemical Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004004669	A	20040108	JP 2003-85686	200303 26 <--
	TW 262359	B	20060921	TW 2003-92106449	200303 24 <--
	CN 1448793	A	20031015	CN 2003-121330	200303 26 <--
	KR 2004002473	A	20040107	KR 2003-19160	200303 27 <--

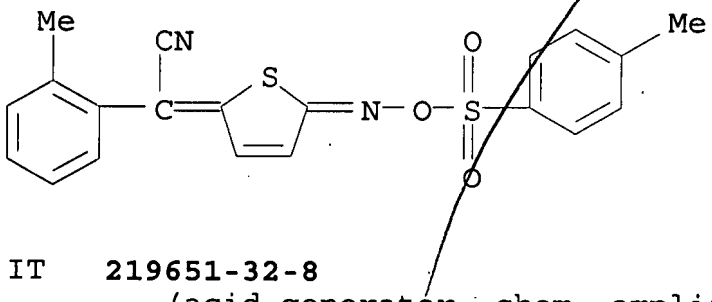
PRAI JP 2002-90980 A 20020328 <--

AB The compns. comprise (A) crosslinking agents, (B) acid generators, and (C) resins having acid-dissociable blocking groups, wherein the resins show poor or no soly. to alkali aq. solns. but good soly. after the blocking groups are dissocd. The crosslinking agents may be urea resins.

IT **219651-32-8**
(acid generator; chem. amplified pos. photoresists having urea-based crosslinkers with high sensitivity and resoln.)

RN 219651-32-8 ZCA

CN Benzeneacetonitrile, 2-methyl-α-[5-[[[(4-methylphenyl)sulfonyl]oxy]imino]-2(5H)-thienylidene]- (CA INDEX NAME)



IT **219651-32-8**
(acid generator; chem. amplified pos. photoresists having urea-based crosslinkers with high sensitivity and resoln.)

L6 ANSWER 14 OF 26 ZCA COPYRIGHT 2007 ACS on STN

AN 140:60322 ZCA

TI A new negative-type photosensitive polymer based on poly(2,6-dihydroxy-1,5-naphthalene), a cross-linker, and a photoacid generator

AU Tsuchiya, Kousuke; Shibasaki, Yuji; Suzuki, Masato; Ueda, Mitsuru

CS Department of Organic and Polymeric Materials, Tokyo Institute of Technology, Graduate School of Science and Engineering, Tokyo, 152-8552, Japan

SO Journal of Photopolymer Science and Technology (**2003**), 16(2), 285-286
CODEN: JSTEEW; ISSN: 0914-9244

PB Technical Association of Photopolymers, Japan

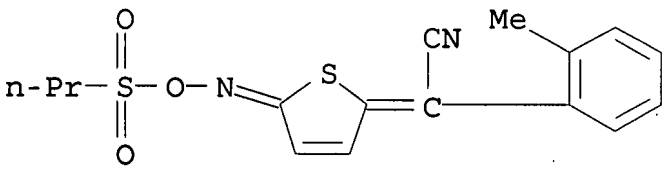
DT Journal

LA English

AB Here we report a new neg.-type alk. developable thermally stable and photosensitive polymer based on poly(2,6-dihydroxy-1,5-naphthalene) (PDHN), a crosslinker 4,4'-methylenebis[2,6-bis(hydroxymethyl)phenol] (MBHP), and a photoacid generator (5-propylsulfonyloxyimino-5H-2-ylidene)-(2-methylphenyl) (PTMA).

IT **282713-83-1**
(neg.-type photosensitive polymer based on poly(2,6-dihydroxy-1,5-

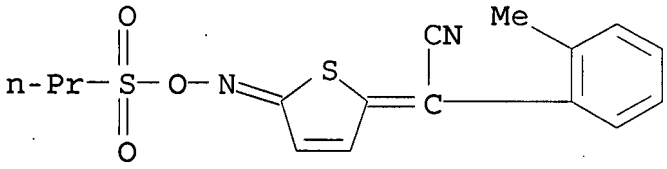
naphthalene), crosslinker, and photoacid generator)
RN 282713-83-1 ZCA
CN Benzeneacetonitrile, 2-methyl-α-[5-[[(propylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (CA INDEX NAME)



IT **282713-83-1**
(neg.-type photosensitive polymer based on poly(2,6-dihydroxy-1,5-naphthalene), crosslinker, and photoacid generator)
RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 15 OF 26 ZCA COPYRIGHT 2007 ACS on STN
AN 140:33561 ZCA
TI Novel photoacid generators for chemically amplified resists
AU Asakura, Toshikage; Yamato, Hitoshi; Matsumoto, Akira; Murer, Peter; Ohwa, Masaki
CS Technology Center Electronic Materials, Coating Effects Segment, Ciba Specialty Chemicals K.K., Amagasaki, 660-0083, Japan
SO Journal of Photopolymer Science and Technology (**2003**), 16(3), 335-345
CODEN: JSTEEW; ISSN: 0914-9244
PB Technical Association of Photopolymers, Japan
DT Journal
LA English
AB Recently the authors developed new class of non-ionic oxime sulfonate PAG. The compds. generate various kinds of sulfonic acids, such as n-propane, n-octane, camphor and p-toluene sulfonic acid under deep-UV exposure and trifluoromethanesulfonic acid under ArF exposure and are applicable for the corresponding chem. amplified (CA) photoresists. The application-relevant properties of the compds. such as soly. in propylene glycol monomethyl ether acetate (PGMEA), Et lactate, Et 3-ethoxypropionate, and 2-heptanone, UV absorption, thermal stability with or without poly(4-hydroxystyrene) (PHS), volatility, performance in model resist formulations were evaluated. In addn., the microlithog. simulation based on the results of DRM results of the trifluoromethanesulfonate was also studied.
IT **282713-83-1**
(comparative PAG; lithog. performance of non-ionic oxime sulfonate photoacid generators in chem. amplified photoresists)
RN 282713-83-1 ZCA

CN Benzeneacetonitrile, 2-methyl-α-[5-[[(propylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (CA INDEX NAME)

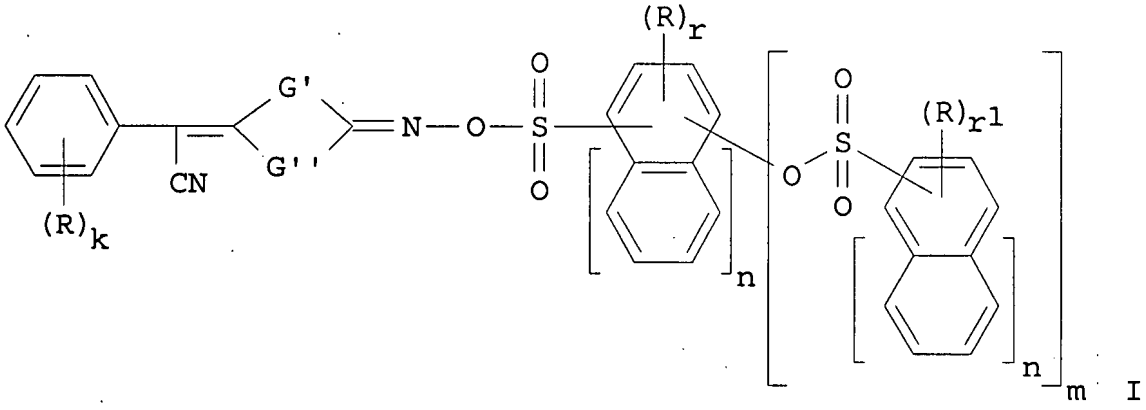


IT **282713-83-1**
(comparative PAG; lithog. performance of non-ionic oxime sulfonate photoacid generators in chem. amplified photoresists)
RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 16 OF 26 ZCA COPYRIGHT 2007 ACS on STN
AN 139:401547 ZCA
TI Photoacid generators and chemically amplified resist compositions for patterning process
IN Ohsawa, Youichi; Kobayashi, Katsuhiro; Takemura, Katsuya; Tsuchiya, Junji; Maeda, Kazunori
PA Shin-Etsu Chemical Co., Ltd., Japan
SO U.S. Pat. Appl. Publ., 49 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2003215738	A1	20031120	US 2003-393006	20030321 <--
US 6916591	B2	20050712		
JP 2004004614	A	20040108	JP 2003-71473	20030317 <--
KR 2004002467	A	20040107	KR 2003-17699	20030321 <--
PRAI JP 2002-80649	A	20020322	<--	

OS MARPAT 139:401547
GI



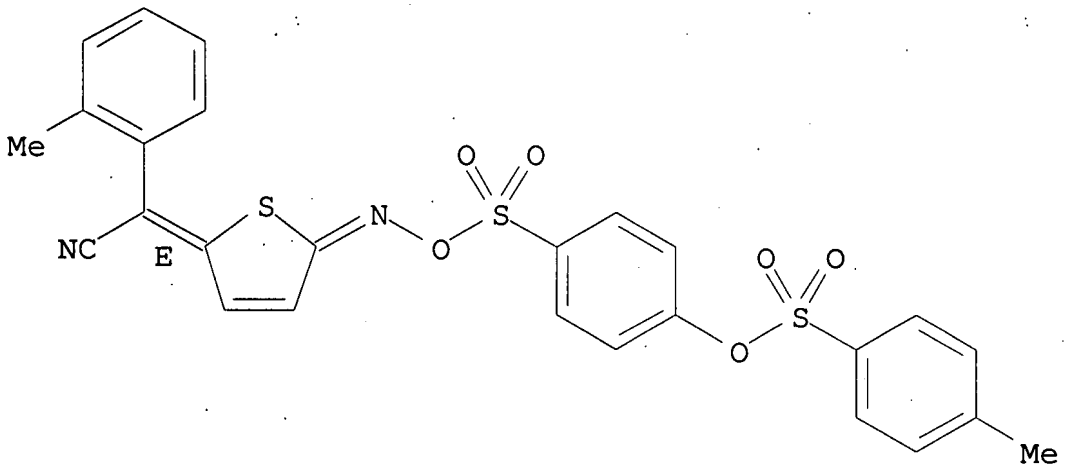
AB Photoacid generators are provided by O-arylsulfonyl-oxime compds. having general formula I (R = H, F, Cl, NO2, alkyl, alkoxy; n = 0, 1; m = 1, 2; r = 0-4; r1 = 0-5; k = 0-4; G1, G2 = S, -CH=CH-). Chem. amplified resist compns. comprising the photoacid generators have many advantages including improved resoln., improved focus latitude, minimized line width variation or shape degrdn. even on long-term PED, and improved pattern profile after development. Because of high resoln., the compns. are suited for microfabrication, esp. by deep UV lithog.

IT **625838-21-3P 625838-22-4P**
(photoacid generator; photoacid generators and chem. amplified resist compns. for patterning process)

RN 625838-21-3 ZCA

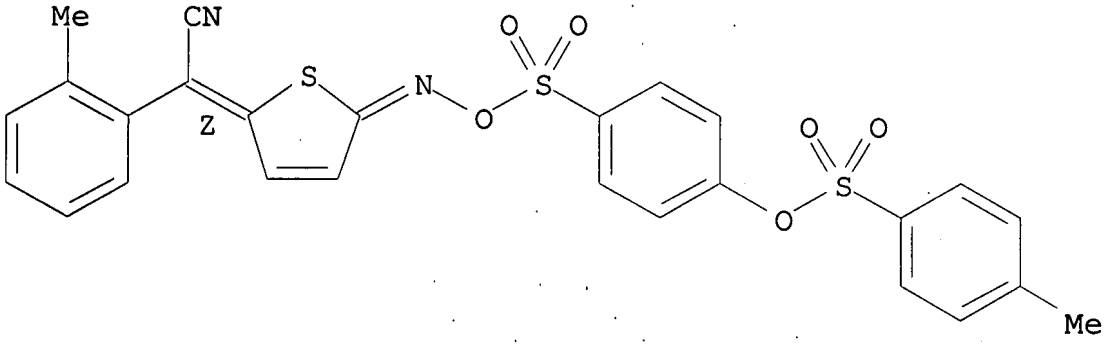
CN Benzeneacetonitrile, 2-methyl-α-[5-[[[[4-[[(4-methylphenyl)sulfonyl]oxy]phenyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]-, (αE)- (9CI) (CA INDEX NAME)

Double bond geometry as described by E or Z.

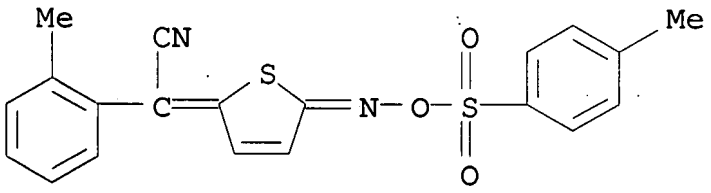


RN 625838-22-4 ZCA
CN Benzeneacetonitrile, 2-methyl-α-[5-[[[[4-[[(4-methylphenyl)sulfonyl]oxy]phenyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]-, (αZ)- (9CI) (CA INDEX NAME)

Double bond geometry as described by E or Z.

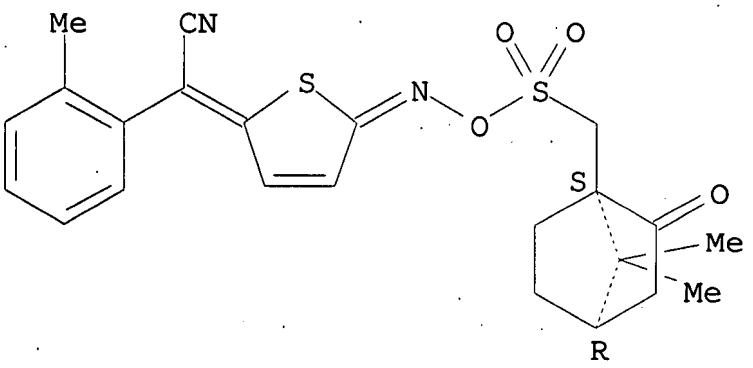


IT **219651-32-8 625849-55-0**
(photoacid generator; photoacid generators and chem. amplified resist compns. for patterning process)
RN 219651-32-8 ZCA
CN Benzeneacetonitrile, 2-methyl-α-[5-[[[(4-methylphenyl)sulfonyl]oxy]imino]-2(5H)-thienylidene]- (CA INDEX NAME)



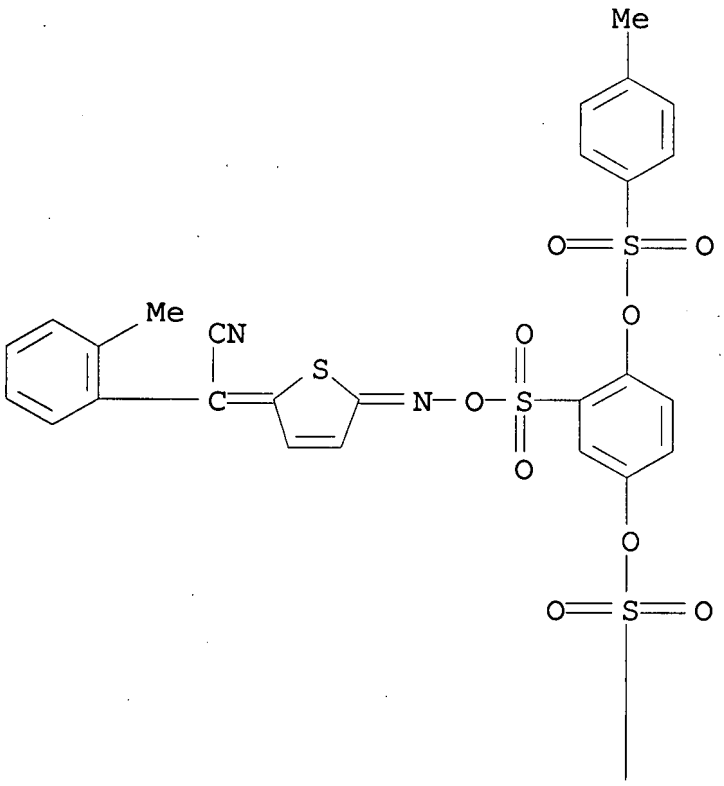
RN 625849-55-0 ZCA
CN Benzeneacetonitrile, α-[5-[[[[[(1S,4R)-7,7-dimethyl-2-oxobicyclo[2.2.1]hept-1-yl]methyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

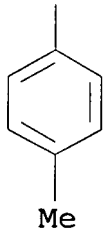


IT **625838-25-7P 625838-28-0P 625838-31-5P**
625838-34-8P 625838-37-1P 625838-40-6P
(photoacid generators and chem. amplified resist compns. for patterning process)
RN 625838-25-7 ZCA
CN Benzeneacetonitrile, α-[5-[[[[2,5-bis[[(4-methylphenyl)sulfonyl]oxy]phenyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]-2-methyl- (9CI) (CA INDEX NAME)

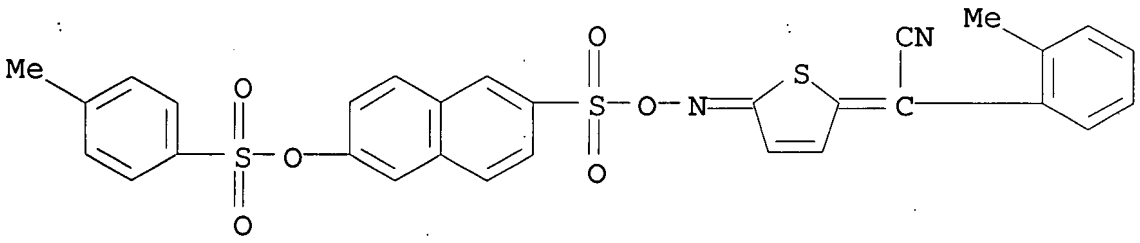
PAGE 1-A



PAGE 2-A

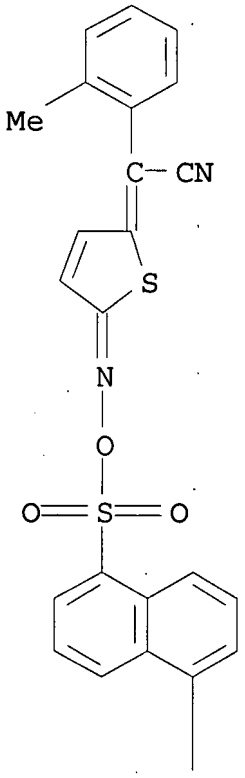


RN 625838-28-0 ZCA
CN Benzeneacetonitrile, 2-methyl-α-[5-[[[[6-[[(4-methylphenyl)sulfonyl]oxy]-2-naphthalenyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]- (9CI) (CA INDEX NAME)

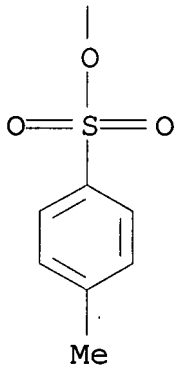


RN 625838-31-5 ZCA
CN Benzeneacetonitrile, 2-methyl-α-[5-[[[[5-[[(4-methylphenyl)sulfonyl]oxy]-1-naphthalenyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]- (9CI) (CA INDEX NAME)

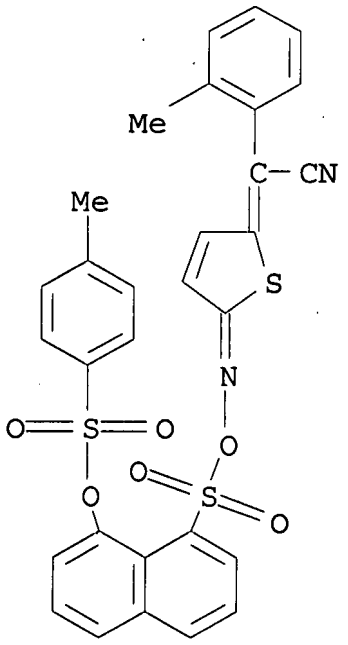
PAGE 1-A



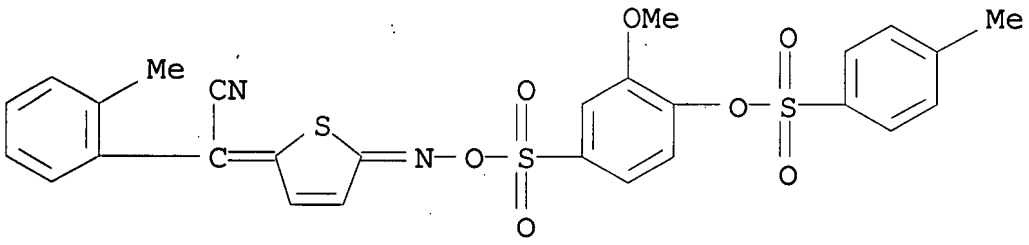
PAGE 2-A



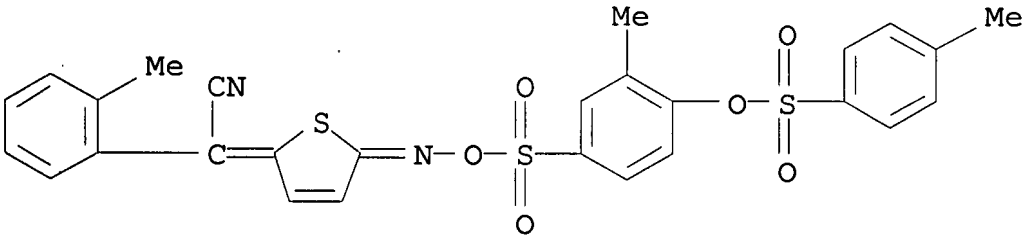
RN 625838-34-8 ZCA
CN Benzeneacetonitrile, 2-methyl-α-[5-[[[[8-[[(4-methylphenyl)sulfonyl]oxy]-1-naphthalenyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]- (9CI) (CA INDEX NAME)



RN 625838-37-1 ZCA
CN Benzeneacetonitrile, α-[5-[[[[3-methoxy-4-[[(4-methylphenyl)sulfonyl]oxy]phenyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]-2-methyl- (9CI) (CA INDEX NAME)



RN 625838-40-6 ZCA
CN Benzeneacetonitrile, 2-methyl-α-[5-[[[[3-methyl-4-[[(4-methylphenyl)sulfonyl]oxy]phenyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]- (9CI) (CA INDEX NAME)



IT **625838-21-3P 625838-22-4P**
(photoacid generator; photoacid generators and chem. amplified resist compns. for patterning process)
IT **219651-32-8 625849-55-0**
(photoacid generator; photoacid generators and chem. amplified resist compns. for patterning process)
IT **625838-25-7P 625838-28-0P 625838-31-5P**
625838-34-8P 625838-37-1P 625838-40-6P
(photoacid generators and chem. amplified resist compns. for patterning process)
RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 17 OF 26 ZCA COPYRIGHT 2007 ACS on STN
AN 139:171281 ZCA
TI Sulfonate derivatives and the use as latent acids for photoresist
IN Matsumoto, Akira; Yamato, Hitoshi; Asakura, Toshikage; Murer, Peter
PA Ciba Specialty Chemicals Holding Inc., Switz.
SO PCT Int. Appl., 118 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI	WO 2003067332	A2	20030814	WO 2003-EP821	200301 28
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	WO 2003067332	A3	20031224		
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	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	CA 2474532	A1	20030814	CA 2003-2474532	200301 28
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	AU 2003206787	A1	20030902	AU 2003-206787	200301 28
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	EP 1472576	A2	20041103	EP 2003-704479	200301 28
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	BR 2003007501	A	20041207	BR 2003-7501	200301 28
				<--	
	JP 2005517026	T	20050609	JP 2003-566624	200301 28
				<--	
	CN 1628268	A	20050615	CN 2003-803305	200301 28
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	US 2005153244	A1	20050714	US 2003-495710	200301 28

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	MX 2004PA06581	A	20041004	MX 2004-PA6581	200407 05
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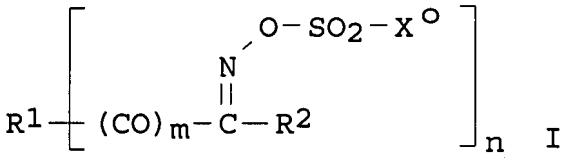
PRAI	EP 2002-405082	A	20020206	<--	
	WO 2003-EP821	W	20030128	<--	

OS MARPAT 139:171281

GI



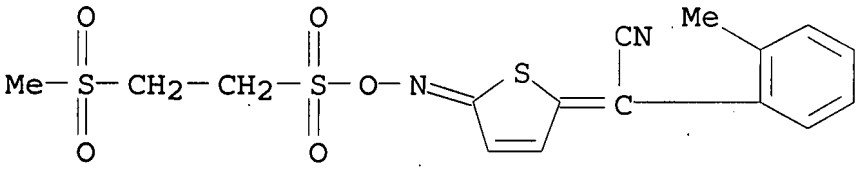
I

AB Chem. amplified photoresist compns. comprises, (a) a compd. which cures upon the action of an acid or a compd. whose soly. is increased upon the action of an acid; and (b) a compd. of the formula I, (n = 1, 2; m = 0, 1; X0 = -[CH2]h-X, -CH=CH2; when n = 1, R1 = Ph, naphthyl, anthracyl, phenanthryl, heteroaryl; when n = 2, R1 = phenylene, naphthylene; R2 has one of the meanings of R1; give high resoln. with good resist profile.

IT **574750-80-4P 574750-82-6P**
(sulfonate derivs. use as latent acids for photoresist)

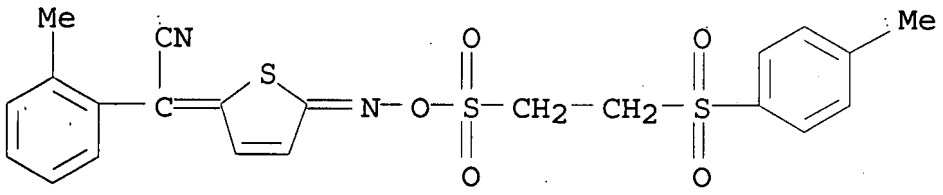
RN 574750-80-4 ZCA

CN Benzeneacetonitrile, 2-methyl-α-[5-[[[[2-(methylsulfonyl)ethyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]- (9CI) (CA INDEX NAME)



RN 574750-82-6 ZCA

CN Benzeneacetonitrile, 2-methyl-α-[5-[[[[2-[(4-methylphenyl)sulfonyl]ethyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]- (9CI) (CA INDEX NAME)



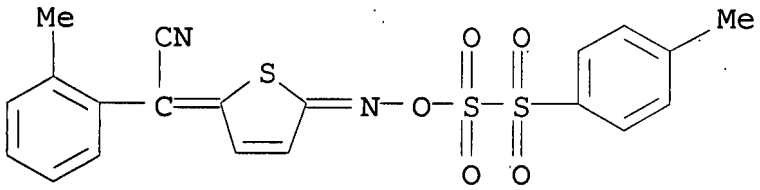
IT **574750-80-4P 574750-82-6P**
(sulfonate derivs. use as latent acids for photoresist)

L6 ANSWER 18 OF 26 ZCA COPYRIGHT 2007 ACS on STN
AN 139:44235 ZCA
TI Chemically amplified positively working photoresist composition containing radiation-sensitive acid-generating agent
IN Nakanishi, Junji; Nanba, Katsuhiko
PA Sumitomo Chemical Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003177536	A	20030627	JP 2001-376908 <--	20011211
JP 3918542	B2	20070523		
CN 1424625	A	20030618	CN 2002-154063 <--	20021209

PRAI JP 2001-376908 A 20011211 <--
OS MARPAT 139:44235
AB The compn. contains (A) a radiation-sensitive acid-generating agent, (B) a resin water-insol. or difficult to be dissolved in water, which can converted into water-sol. by an acid, (C) a basic compd., and (D) a compd. having molar absorption coeff. 100-50,000 at wavelength 300-450 nm. The compn. is suitable for photolithog. under high-energy radiation, e.g., UV, excimer laser, electron beam, x ray, etc.
IT **544442-80-0**
(chem. amplified pos. working photoresist compn. contg. water-insol. resin and radiation-sensitive acid-generating agent)
RN 544442-80-0 ZCA

CN Benzeneacetonitrile, 2-methyl-α-[5-[[[(4-methylphenyl)disulfonyl]oxy]imino]-2(5H)-thienylidene]- (9CI) (CA INDEX NAME)

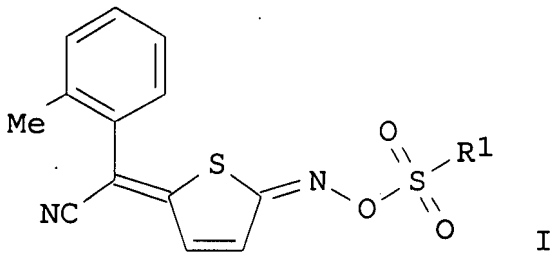


IT **544442-80-0**
(chem. amplified pos. working photoresist compn. contg. water-insol. resin and radiation-sensitive acid-generating agent)

L6 ANSWER 19 OF 26 ZCA COPYRIGHT 2007 ACS on STN
AN 138:328995 ZCA
TI Chemically-amplified positive-working resist compositions containing quaternary ammonium compounds as quenchers
IN Nakanishi, Junji; Nanba, Katsuhiko
PA Sumitomo Chemical Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003122013	A	20030425	JP 2001-321711 <--	20011019
	JP 3849486	B2	20061122		
	TW 257033	B	20060621	TW 2002-91123414 <--	20021011
	CN 1412619	A	20030423	CN 2002-145886 <--	20021016
	US 2004076902	A1	20040422	US 2002-271754 <--	20021017
PRAI	JP 2001-321711	A	20011019 <--		

OS MARPAT 138:328995
GI



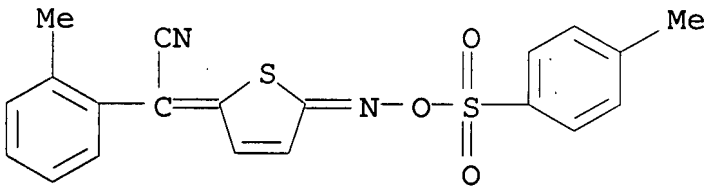
I

AB The compns., which show high resoln. and high sensitivity, contain (A) thiophene compds. I (R1 = hydrocarbyl which may have O- or N-contg. substituent or halo), (B) resins which are insol. or slightly-sol. in alk. soln. but become alkali-sol. upon action of acids, and (C) quaternary ammonium salts.

IT **219651-32-8**
(photoacid generator; chem.-amplified pos.-working resist compns. contg. quaternary ammonium compds. as quenchers)

RN 219651-32-8 ZCA

CN Benzeneacetonitrile, 2-methyl-α-[5-[[[(4-methylphenyl)sulfonyl]oxy]imino]-2(5H)-thienylidene]- (CA INDEX NAME)



IT **219651-32-8**
(photoacid generator; chem.-amplified pos.-working resist compns. contg. quaternary ammonium compds. as quenchers)

L6 ANSWER 20 OF 26 ZCA COPYRIGHT 2007 ACS on STN

AN 138:161088 ZCA

TI Chemical amplification-type positive-working resist composition for liquid crystal display

IN Nitta, Kazuyuki; Kato, Tetsuya; Aoki, Tomosaburo

PA Tokyo Ohka Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF

DT Patent
LA Japanese
FAN.CNT 1

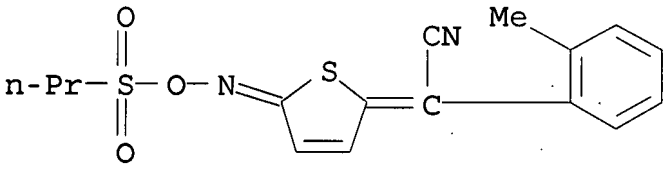
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003050460	A	20030221	JP 2001-238039 <--	20010806
	TW 594391	B	20040621	TW 2002-91116898 <--	20020729
PRAI	JP 2001-238039	A	20010806 <--		

OS MARPAT 138:161088

AB The compn. contains (A) an alkali-sol. resin comprising a novolak resin whose soly. to 2.38 wt.% tetramethylammonium hydroxide aq. soln. is 375-100 Å/s, (B) a compd. generating an acid by radiation, and (C) a crosslinkable polyvinyl ether dissolved in an org. solvent. Resist pattern is formed by (1) coating the compn. on a glass substrate and drying, (2) exposing through a mask pattern and heating, and (3) developing with an alk. developer. The compn. shows high sensitivity, resoln., and loss of the film is prevented.

IT **282713-83-1**
(acid generator; chem. amplification-type resist compn. contg. novolac resin, acid generator, and crosslinkable polyvinyl ether)

RN 282713-83-1 ZCA
CN Benzeneacetonitrile, 2-methyl-α-[5-[[(propylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (CA INDEX NAME)



IT **282713-83-1**
(acid generator; chem. amplification-type resist compn. contg. novolac resin, acid generator, and crosslinkable polyvinyl ether)

L6 ANSWER 21 OF 26 ZCA COPYRIGHT 2007 ACS on STN
AN 138:31029 ZCA
TI Substituted oxime derivatives as photolatent acid generators in chemically-amplified photoresist compositions
IN Matsumoto, Akira; Yamato, Hitoshi; Asakura, Toshikage; Ohwa, Masaki; Murer, Peter

PA Ciba Specialty Chemicals Holding Inc., Switz.
SO PCT Int. Appl., 66 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

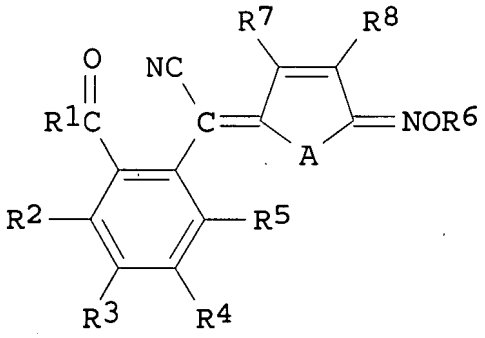
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002098870	A1	20021212	WO 2002-EP5667	20020523
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2002304646	A1	20021216	AU 2002-304646	20020523
	EP 1392675	A1	20040303	EP 2002-732733 <--	20020523
	EP 1392675	B1	20050209		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	CN 1512990	A	20040714	CN 2002-810931 <--	20020523
	JP 2005504013	T	20050210	JP 2003-501993 <--	20020523
	AT 288907	T	20050215	AT 2002-732733 <--	20020523
	US 2004209186	A1	20041021	US 2003-478963	20030311

<--

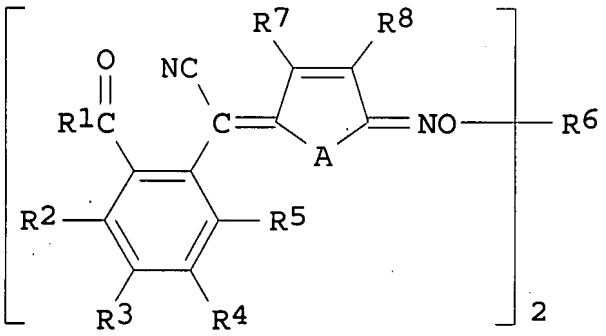
	US 7026094	B2	20060411	
PRAI	EP 2001-810533	A	20010601	<--
	WO 2002-EP5667	W	20020523	<--

OS MARPAT 138:31029

GI



I



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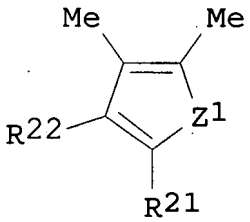


(A3)

III

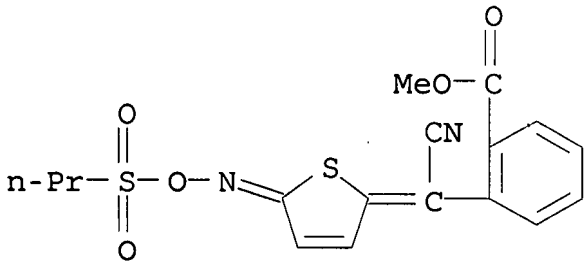
AB Disclosed are new oxime sulfonate compds. of the formula I and II (R1 = C1-C12-alkyl, C1-C4-haloalkyl, H, OR9, NR10R11, SR12, unsubstituted or substituted by OH phenol, C1-C18-alkyl, halogen and/or C1-C12-alkoxy; R2, R3, R4, R5 = H, C1-C12-alkyl; R6 = C1-C18-alkylsulfonyl, phenyl-C1-C3-alkylsulfonyl or phenylsulfonyl; R'6 = phenylenedisulfonyl, diphenylenedisulfonyl; R7, R8, R9 = H, C1-C6-alkyl; R10, R11 = H, C1-C18-alkyl; R12 = H, Ph, C1-C18-alkyl; A = S, O, -Z=C(R21)-, phenyl-R21R22, or a group of formula III (R21, R22 are same as R7; Z = CR22, N; Z1 = CR22, N, CH2, S, O; and as further defined in the claims)) which particularly suitable as photo-latent acids in chem.-amplified photoresist compns. Chem. amplified photoresist compns. comprising oxime derivs. of the

present invention are thermally stable, even at high bake temps. during processing and provide high photospeed.

IT **477962-01-9P 477962-03-1P 477962-05-3P 477962-07-5P 477962-08-6P 477962-10-0P 477962-12-2P**
(photolatent acid generator; substituted oxime derivs. as photolatent acid generators in chem.-amplified photoresist compns.)

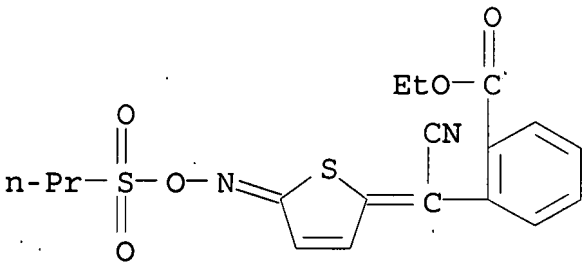
RN 477962-01-9 ZCA

CN Benzoic acid, 2-[cyano[5-[[(propylsulfonyl)oxy]imino]-2(5H)-thienylidene]methyl]-, methyl ester (9CI) (CA INDEX NAME)



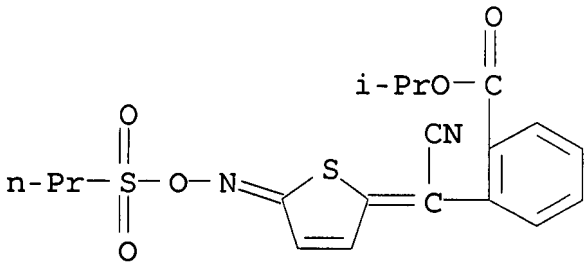
RN 477962-03-1 ZCA

CN Benzoic acid, 2-[cyano[5-[[(propylsulfonyl)oxy]imino]-2(5H)-thienylidene]methyl]-, ethyl ester (9CI) (CA INDEX NAME)



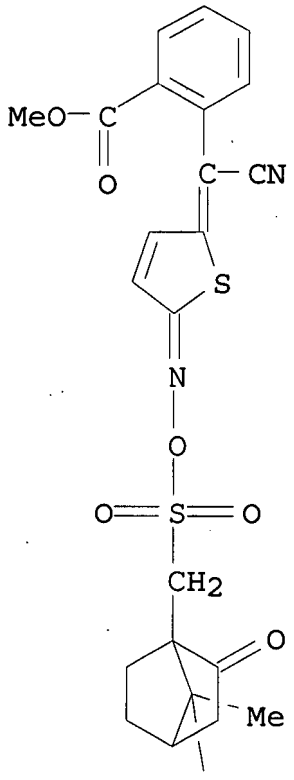
RN 477962-05-3 ZCA

CN Benzoic acid, 2-[cyano[5-[[(propylsulfonyl)oxy]imino]-2(5H)-thienylidene]methyl]-, 1-methylethyl ester (9CI) (CA INDEX NAME)



RN 477962-07-5 ZCA
CN Benzoic acid, 2-[cyano[5-[[[[(7,7-dimethyl-2-oxobicyclo[2.2.1]hept-1-yl)methyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]methyl]-, methyl ester (9CI) (CA INDEX NAME)

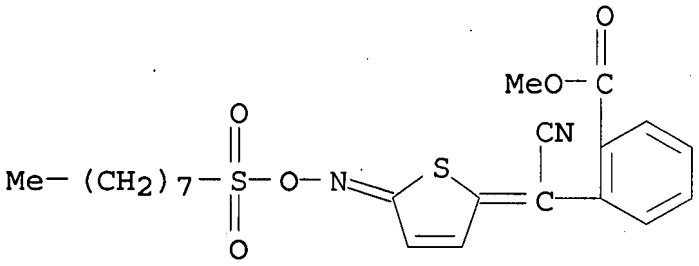
PAGE 1-A



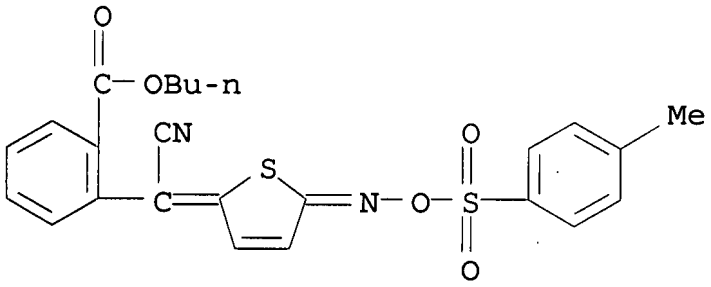
PAGE 2-A

Me

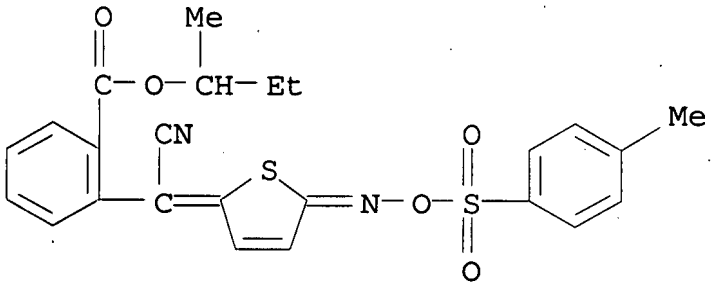
RN 477962-08-6 ZCA
CN Benzoic acid, 2-[cyano[5-[[(octylsulfonyl)oxy]imino]-2(5H)-thienylidene]methyl]-, methyl ester (9CI) (CA INDEX NAME)



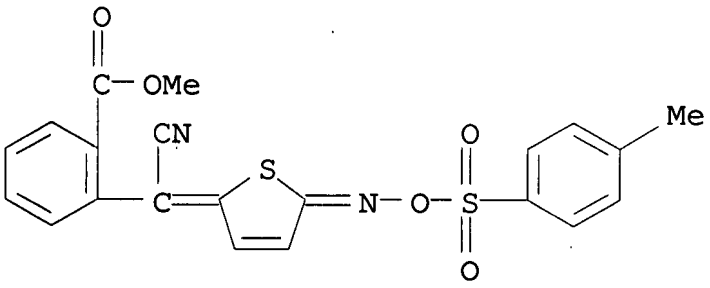
RN 477962-10-0 ZCA
CN Benzoic acid, 2-[cyano[5-[[[(4-methylphenyl)sulfonyl]oxy]imino]-2(5H)-thienylidene]methyl]-, butyl ester (9CI) (CA INDEX NAME)



RN 477962-12-2 ZCA
CN Benzoic acid, 2-[cyano[5-[[[(4-methylphenyl)sulfonyl]oxy]imino]-2(5H)-thienylidene]methyl]-, 1-methylpropyl ester (9CI) (CA INDEX NAME)



IT **477962-63-3P**
(substituted oxime derivs. as photolatent acid generators in chem.-amplified photoresist compns.)
RN 477962-63-3 ZCA
CN Benzoic acid, 2-[cyano[5-[[[(4-methylphenyl)sulfonyl]oxy]imino]-2(5H)-thienylidene]methyl]-, methyl ester (9CI) (CA INDEX NAME)



IT **477962-01-9P 477962-03-1P 477962-05-3P**
477962-07-5P 477962-08-6P 477962-10-0P
477962-12-2P
(photolatent acid generator; substituted oxime derivs. as photolatent acid generators in chem.-amplified photoresist compns.)
IT **477962-63-3P**
(substituted oxime derivs. as photolatent acid generators in chem.-amplified photoresist compns.)
RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 22 OF 26 ZCA COPYRIGHT 2007 ACS on STN
AN 137:101421 ZCA
TI Radiation-sensitive resin compositions for chemically amplified deep UV resists and electron-beam resists
IN Suzuki, Aki; Niwata, Koichi; Yokoyama, Kenichi; Kobayashi, Eiichi
PA JSR Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 23 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2002202603	A	20020719	JP 2000-340798	20001108

<--

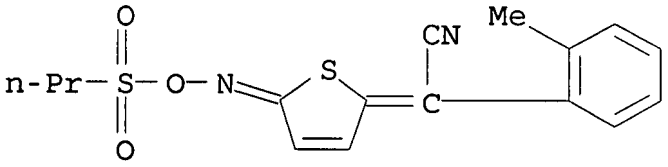
PRAI JP 2000-323160 A 20001023 <--
OS MARPAT 137:101421
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The compns. having high sensitivity to KrF or ArF excimer lasers, electron beams, etc., contain (A) radiation-sensitive acid generators I and/or II (R1, R2 = C1-10 linear, branched, or cyclic alkyl, C1-10 linear, branched, or cyclic fluoroalkyl, C6-11 aryl which may be substituted with F) and (B) resins contg. repeating units of acetalated styrene derivs. such as p-(1-ethoxyethoxy)styrenes and p-hydroxystyrene. The compns. give sharp patterns with suppressed nanoedge roughness.

IT **282713-83-1**
(photoacid generator; radiation-sensitive resin compns. for chem. amplified deep UV resists and EB resists)

RN 282713-83-1 ZCA
CN Benzeneacetonitrile, 2-methyl-α-[5-[[(propylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (CA INDEX NAME)



IT **282713-83-1**
(photoacid generator; radiation-sensitive resin compns. for chem. amplified deep UV resists and EB resists)

L6 ANSWER 23 OF 26 ZCA COPYRIGHT 2007 ACS on STN
AN 136:110027 ZCA
TI Novel photoacid generators for chemically amplified resists with g-line, i-line, and DUV exposure
AU Asakura, Toshikage; Yamato, Hitoshi; Matsumoto, Akira; Ohwa, Masaki
CS Technology Center Imaging, Additives Division, Ciba Specialty Chemicals K.K., Japan
SO Proceedings of SPIE-The International Society for Optical Engineering (**2001**), 4345(Pt. 1, Advances in Resist Technology and Processing XVIII), 484-493
CODEN: PSISDG; ISSN: 0277-786X
PB SPIE-The International Society for Optical Engineering
DT Journal

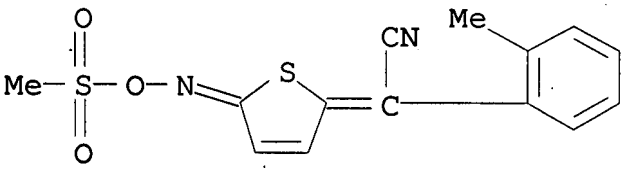
LA English

AB A new class of compds., (5-alkylsulfonyloxyimino-5H-thiophen-2-ylidene)-2-methylphen yl-acetonitriles, characterized as non-ionic and halogen-free photoacid generators (PAG's) was developed. The compds. generate various kinds of sulfonic acids, such as methane, n-propane and camphor sulfonic acid under the g-line (436 nm), i-line (365 nm) and Deep UV (DUV, 248 nm or shorter) exposure and are applicable for chem. amplified (CA) photoresists. The application-relevant properties of the compds. such as soly. in propylene glycol monomethyl ether acetate (PGMEA), UV absorption, thermal stability with or without poly(4-hydroxystyrene), storage stability in a neat form, sensitivity in some model resist formulations and dissoln. inhibition efficiency during development process were evaluated. The compds. exhibit enough soly. in PGMEA, red-shifted UV absorption (lamdamax: 405 nm), good thermal stability up to 140 C in a phenolic matrix, effective acid generation in terms of quantum yield in an acetonitrile soln. and high sensitivity in neg. tone and pos. tone CA resist formulations, such as tert-Bu ester type and t-BOC type formulations, with g-line, i-line and DUV exposure. The photochem. decompn. reaction of the compd. was also studied. Addnl. a scanning electron microscope (SEM) photog. as an application example of microlithog. by the CA neg. tone resist with the PAG is presented.

IT **210432-74-9 219651-50-0 282713-83-1**
(non-ionic and halogen-free photoacid generator for chem. amplified photoresists with g-line, i-line, and DUV exposure)

RN 210432-74-9 ZCA

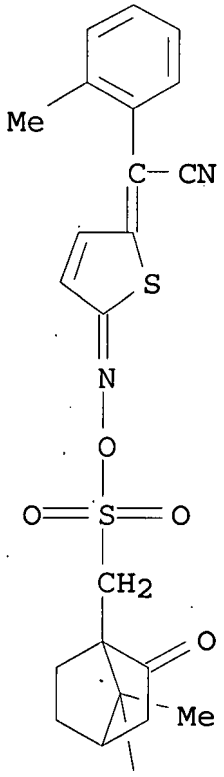
CN Benzeneacetonitrile, 2-methyl-α-[5-[[(methylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (9CI) (CA INDEX NAME)



RN 219651-50-0 ZCA

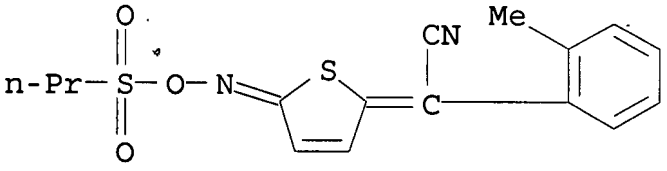
CN Benzeneacetonitrile, α-[5-[[[[(7,7-dimethyl-2-oxobicyclo[2.2.1]hept-1-yl)methyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]-2-methyl- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

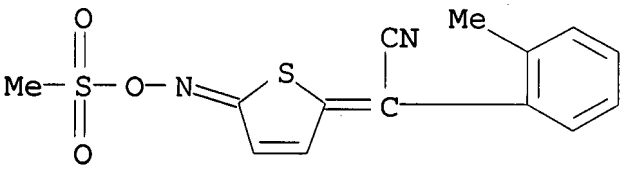
RN 282713-83-1 ZCA
CN Benzeneacetonitrile, 2-methyl-α-[5-[[(propylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (CA INDEX NAME)



IT **210432-74-9 219651-50-0 282713-83-1**
(non-ionic and halogen-free photoacid generator for chem.

amplified photoresists with g-line, i-line, and DUV exposure)
RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 24 OF 26 ZCA COPYRIGHT 2007 ACS on STN
AN 133:288704 ZCA
TI Novel photoacid generators
AU Asakura, Toshikage; Yamato, Hitoshi; Ohwa, Masaki
CS Technology Center Imaging, Additives Division, Ciba Specialty Chemicals K.K. Japan, Takarazuka, 665-8666, Japan
SO Journal of Photopolymer Science and Technology (**2000**), 13(2), 223-230
CODEN: JSTEEW; ISSN: 0914-9244
PB Technical Association of Photopolymers, Japan
DT Journal
LA English
AB A new class of compds. which are nonionic and halogen-free photo acid generators applicable for g-line, i-line and D-UV photoresists is reported. The compds. exhibit high soly. in PGMEA, thermal stability in a phenolic polymer matrix up to 140°, storage stability <40° >1 yr, red-shifted absorption profile reaching to 490 nm, effective acid generation in terms of quantum yield and high sensitivity in resist formulations with various exposure wavelength. An application example of the new photoacid generator for chem. amplified neg. resist is presented.
IT **210432-74-9**, 5-Methylsulfonyloxyimino-5H-thiophene-2-ylidene-2-methylphenyl acetonitrile
(novel non-ionic and halogen-free photoacid generators for g-line and i-line and D-UV photoresists)
RN 210432-74-9 ZCA
CN Benzeneacetonitrile, 2-methyl-α-[5-[[(methylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (9CI) (CA INDEX NAME)



IT **210432-74-9**, 5-Methylsulfonyloxyimino-5H-thiophene-2-ylidene-2-methylphenyl acetonitrile
(novel non-ionic and halogen-free photoacid generators for g-line and i-line and D-UV photoresists)
RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 25 OF 26 ZCA COPYRIGHT 2007 ACS on STN
AN 133:230461 ZCA
TI Oxime derivatives and the use thereof as photoinitiators
IN Kura, Hisatoshi; Yamato, Hitoshi; Ohwa, Masaki; Dietliker, Kurt
PA Ciba Specialty Chemicals Holding Inc., Switz.
SO PCT Int. Appl., 84 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2000052530	A1	20000908	WO 2000-EP1404	20000221
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W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1163553	A1	20011219	EP 2000-920439	20000221
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US 6806024	B1	20041019	US 2001-914433	

200108
27

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PRAI EP 1999-810180 A 19990303 <--
EP 2000-920439 A3 20000221 <--
WO 2000-EP1404 W 20000221 <--
OS MARPAT 133:230461
GI

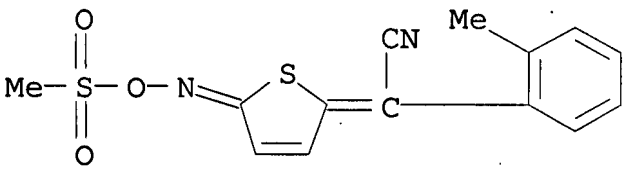
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB This patent disclosed radically photopolymerizable compns. suitable for prepn. of color filter systems, comprising at least one ethylenically unsatd. photopolymerizable compd., at least one compd. as photoinitiator of formulas I, II, III, IV, V, and/or IV (m = 0, 1; n = 0, 1, 2 or 3; p = 1, 2; R1 = Ph, naphthyl, anthracyl or phenanthryl, heteroaryl radical, C2-C12 alkenyl, C4-C8 cycloalkenyl, or C6-C12 bicycloalkenyl; R1' = C2-C12 alkylene, or phenylene; R2 has one of the meanings of R1 or is phenyl; R3 is C1-C18 alkylsulfonyl, or phenyl-C1-C3 alkylsulfonyl if x = 1 , R3 is for example C2-C12 alkylenedisulfonyl if x is 2; R4, R5 = H, halogen, or C1-C8 alkyl; R6, R7, R8 = H, R26Y-, or phenyl; R9 inter alia is C5-C8cycloalkyl, or phenyl; A = -S-, -O-, or -NR10- ; Q = C1-C8-alkylene optionally interrupted by -O-; X = -O- or -NR9-; R10 = H, or phenyl), and at least one coinitiator.

IT **210432-74-9**
(radically photopolymerizable compn. contg.)

RN 210432-74-9 ZCA

CN Benzeneacetonitrile, 2-methyl-α-[5-[[(methylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (9CI) (CA INDEX NAME)



IT **210432-74-9**
(radically photopolymerizable compn. contg.)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 26 OF 26 ZCA COPYRIGHT 2007 ACS on STN

AN 130:117342 ZCA
TI New oxime sulfonates and use thereof as latent sulfonic acids for photoresists
IN Yamato, Hitoshi; Bleier, Hartmut; Birbaum, Jean-Luc; Kunz, Martin; Dietliker, Kurt; De Leo, Christoph; Asakura, Toshikage
PA Ciba Specialty Chemicals Holding Inc., Switz.
SO PCT Int. Appl., 64 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9901429	A1	19990114	WO 1998-EP3750	19980619
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	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	TW 550439	B	20030901	TW 1998-87108592	19980602
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	AU 9886281	A	19990125	AU 1998-86281	19980619
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	EP 993445	A1	20000419	EP 1998-937513	19980619
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	EP 993445	B1	20020828		
	R: CH, DE, FR, GB, LI				
	JP 2002508774	T	20020319	JP 1999-506240	19980619
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	US 6004724	A	19991221	US 1998-104676	19980625

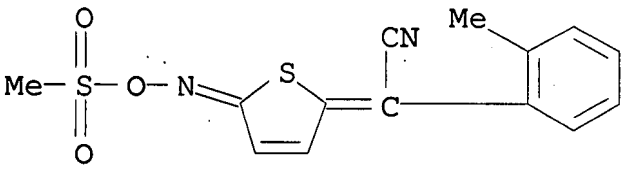
PRAI EP 1997-810422 A 19970701 <--
WO 1998-EP3750 W 19980619 <--
OS MARPAT 130:117342
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

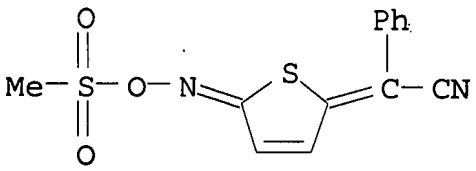
AB New oxime sulfonates of formula I or II, wherein m is 0 or 1; x is 1 or 2; R1 is Ph which is unsubstituted or substituted or R1 is a heteroaryl radical that is unsubstituted or substituted or, if m is 0, R1 addnl. is C2-6 alkoxycarbonyl, phenoxycarbonyl, or CN; R2 has one of the meanings given for R1; n is 1 or 2; R3 is C1-18 alkyl; R4 and R5 are hydrogen, halogen, C1-6 alkyl; R6, when x is 1, has one of the meanings given for R3 and, when x is 2, is C2-12 alkylene or phenylene; R7 is C2-12 alkylene or phenylene; A is S, O, NR8, ZCR9, III, IV, or V; R8 is hydrogen or phenyl; R9 and R10 have one of the meanings given for R4, are useful as latent sulfonic acids, esp. in photoresist applications.

IT **210432-74-9P 219650-82-5P 219651-13-5P**
219651-16-8P 219651-18-0P 219651-19-1P
219651-20-4P 219651-22-6P 219651-24-8P
219651-26-0P 219651-28-2P 219651-30-6P
219651-32-8P 219651-34-0P 219651-36-2P
219651-37-3P 219651-38-4P 219651-40-8P
219651-48-6P 219651-50-0P
(prepn. and use as photoacid generator for photoresists)

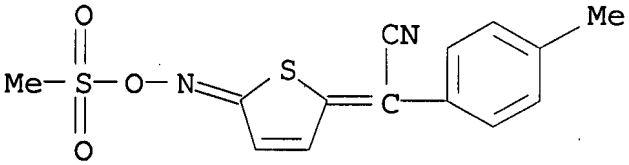
RN 210432-74-9 ZCA
CN Benzeneacetonitrile, 2-methyl-α-[5-[[(methylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (9CI) (CA INDEX NAME)



RN 219650-82-5 ZCA
CN Benzeneacetonitrile, α-[5-[[(methylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (9CI) (CA INDEX NAME)



RN 219651-13-5 ZCA
CN Benzeneacetonitrile, 4-methyl-α-[5-[[(methylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (9CI) (CA INDEX NAME)



RN 219651-16-8 ZCA
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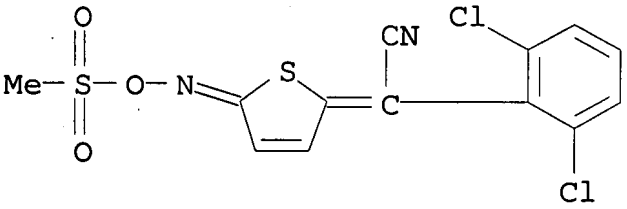
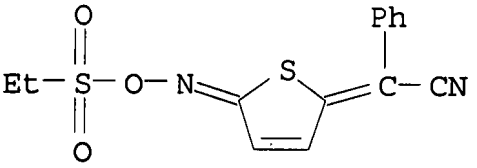
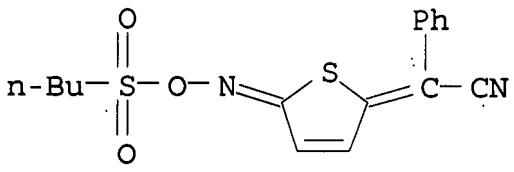


RN 219651-18-0 ZCA
CN Benzeneacetonitrile, α-[5-[[(ethylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (9CI) (CA INDEX NAME)



RN 219651-19-1 ZCA
CN Benzeneacetonitrile, α-[5-[[(butylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (9CI) (CA INDEX NAME)



RN 219651-20-4 ZCA
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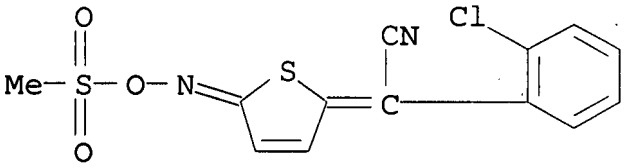

RN 219651-22-6 ZCA
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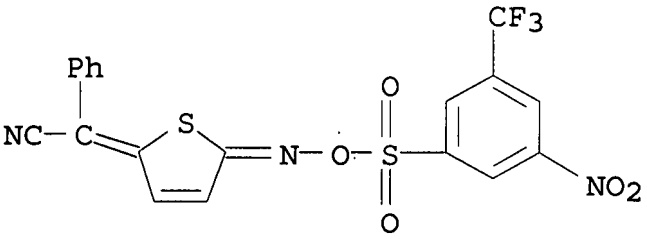

RN 219651-24-8 ZCA
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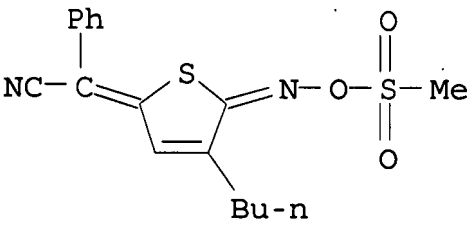
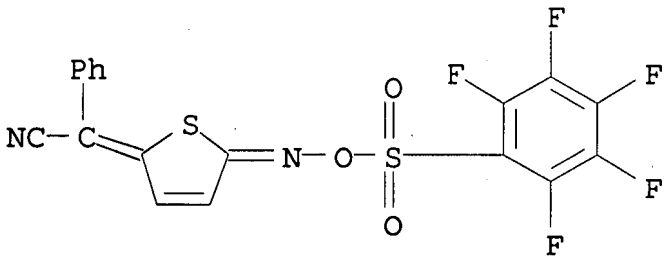
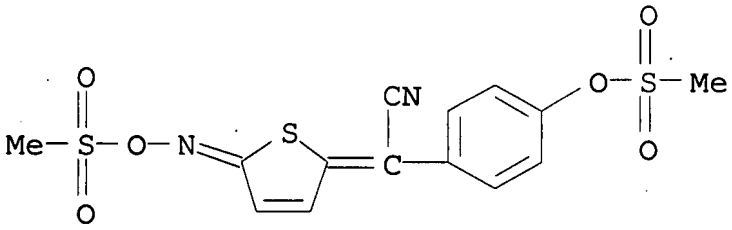


RN 219651-26-0 ZCA
CN Benzeneacetonitrile, α-[5-[[[(pentafluorophenyl)sulfonyl]oxy]i

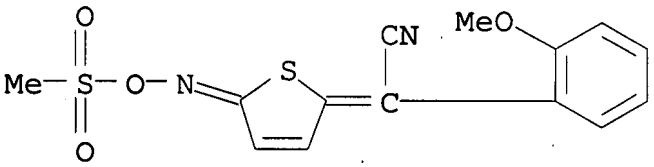
mino]-2(5H)-thienylidene]- (9CI) (CA INDEX NAME)



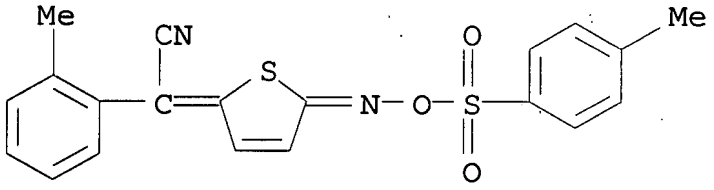
RN 219651-28-2 ZCA
CN Benzeneacetonitrile, 4-[(methylsulfonyl)oxy]-α-[5-[[(methylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (9CI) (CA INDEX NAME)



RN 219651-30-6 ZCA
CN Benzeneacetonitrile, 2-methoxy-α-[5-[[(methylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (9CI) (CA INDEX NAME)



RN 219651-32-8 ZCA
CN Benzeneacetonitrile, 2-methyl-α-[5-[[[(4-methylphenyl)sulfonyl]oxy]imino]-2(5H)-thienylidene]- (CA INDEX NAME)



RN 219651-34-0 ZCA
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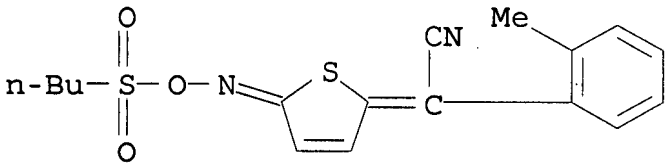
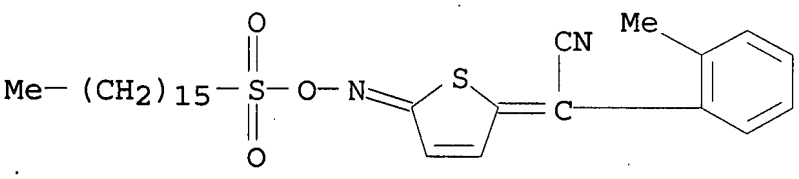
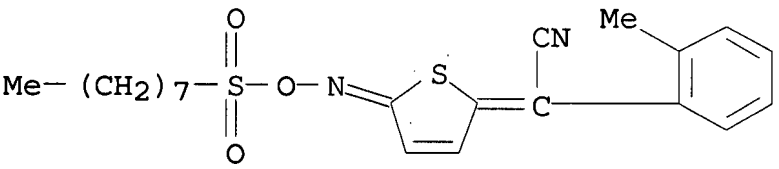


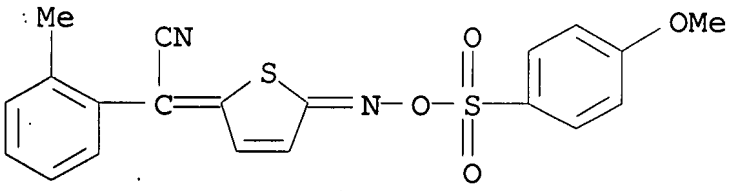
RN 219651-36-2 ZCA
CN Benzeneacetonitrile, α-[5-[[(hexadecylsulfonyl)oxy]imino]-2(5H)-thienylidene]-2-methyl- (9CI) (CA INDEX NAME)



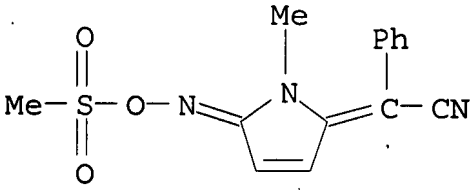
RN 219651-37-3 ZCA
CN Benzeneacetonitrile, 2-methyl-α-[5-[[(octylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (CA INDEX NAME)



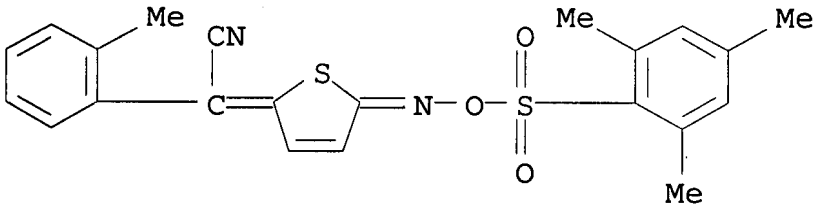
RN 219651-38-4 ZCA
CN Benzeneacetonitrile, α-[5-[[[(4-methoxyphenyl)sulfonyl]oxy]imino]-2(5H)-thienylidene]-2-methyl- (9CI) (CA INDEX NAME)



RN 219651-40-8 ZCA
CN Benzeneacetonitrile, α-[1,5-dihydro-1-methyl-5-[[(methylsulfonyl)oxy]imino]-2H-pyrrol-2-ylidene]- (9CI) (CA INDEX NAME)



RN 219651-48-6 ZCA
CN Benzeneacetonitrile, 2-methyl-α-[5-[[[(2,4,6-trimethylphenyl)sulfonyl]oxy]imino]-2(5H)-thienylidene]- (9CI) (CA INDEX NAME)



RN 219651-50-0 ZCA
CN Benzeneacetonitrile, α-[5-[[[[(7,7-dimethyl-2-oxobicyclo[2.2.1]hept-1-yl)methyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]-2-methyl- (9CI) (CA INDEX NAME)

Access DB# 236232

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Sin J. Lee Examiner # : 76060 Date: 9-4-07
Art Unit: 1752 Phone Number 30 2-1333 Serial Number: 10/322,036
Mail Box and Bldg/Room Location: 9C15 (Rem) Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Pl7. Ale Bib.

Inventors (please provide full names): _____

Earliest Priority Filing Date: _____

***For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.**

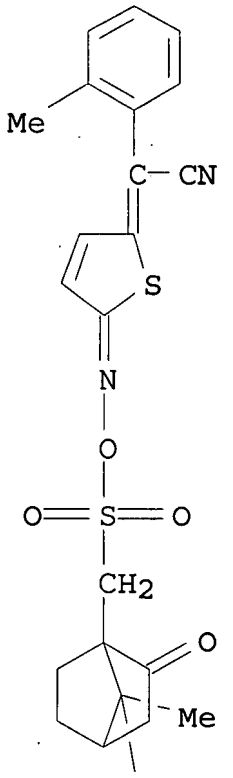
Please search for a photoacid generator of formula (Vi) of Cl. #1

****

STAFF USE ONLY	Type of Search	Vendors and cost where applicable
Searcher: EJS	NA Sequence (#)	STN
Searcher Phone #:	AA Sequence (#)	Dialog
Searcher Location:	Structure (#)	Questel/Orbit
Date Searcher Picked Up:	Bibliographic	Dr.Link
Date Completed: 9-13-07	Litigation	Lexis/Nexis
Searcher Prep & Review Time:	Fulltext	Sequence Systems
Clerical Prep Time:	Patent Family	WWW/Internet
Online Time:	Other	Other (specify)

PTO-1590 (8-01)

PAGE 1-A



PAGE 2-A

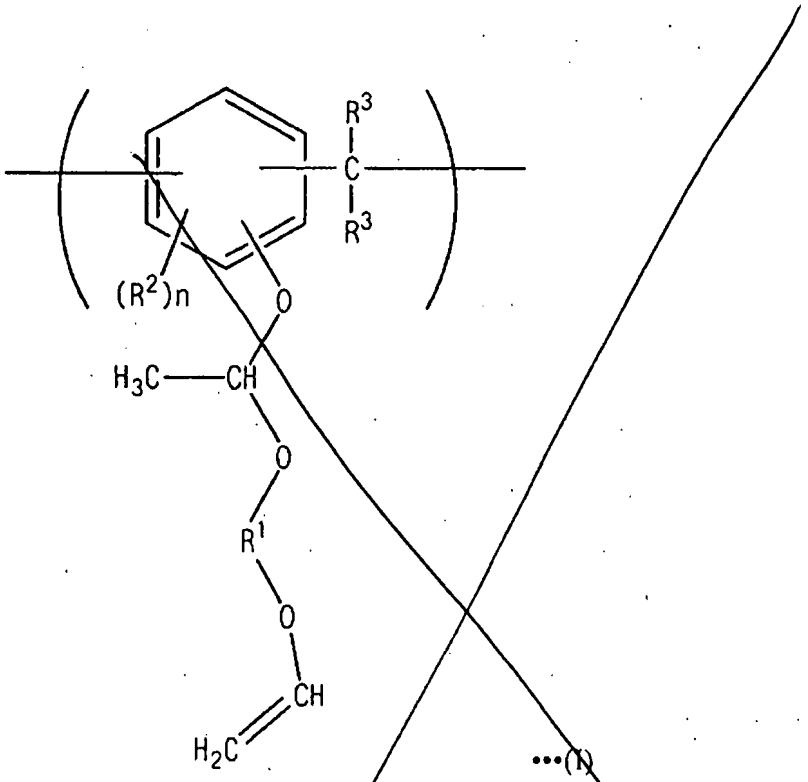
IT **210432-74-9P 219650-82-5P 219651-13-5P**
219651-16-8P 219651-18-0P 219651-19-1P
219651-20-4P 219651-22-6P 219651-24-8P
219651-26-0P 219651-28-2P 219651-30-6P
219651-32-8P 219651-34-0P 219651-36-2P
219651-37-3P 219651-38-4P 219651-40-8P
219651-48-6P 219651-50-0P
(prepn. and use as photoacid generator for photoresists)

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

AMENDMENTS TO THE CLAIMS

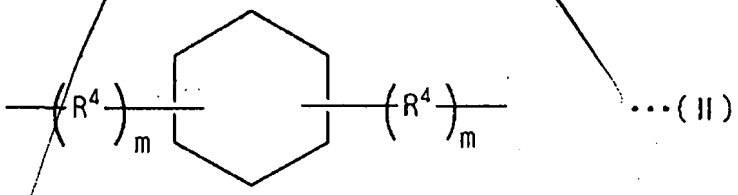
1. **(Currently amended)** A chemical amplification type positive photoresist composition prepared by dissolving:

(A) a slightly alkali-soluble or alkali-insoluble novolak resin having a property that solubility in an aqueous alkali solution is enhanced in the presence of an acid, comprising either or both of a constituent unit (a1) represented by the following general formula (I):



...(I)

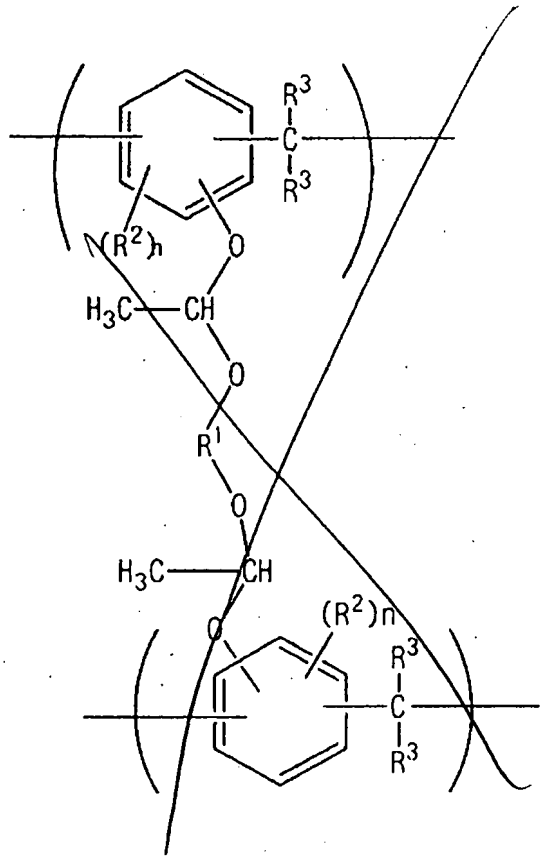
wherein R^1 represents either an alkylene group having 1 to 10 carbon atoms which may have a substituent or a group represented by the following general formula (II):



...(II)

(wherein R^4 represents an alkylene group having 1 to 10 carbon atoms which may have a substituent and m represents 0 or 1), the alkylene group may have an oxygen bond (ether bond) in the main chain, R^2 and R^3 each independently represents a hydrogen atom or an alkyl group

having 1 to 3 carbon atoms, and n represents an integer of 1 to 3, and an intermolecular crosslinked moiety (a2) represented by the following general formula (III):

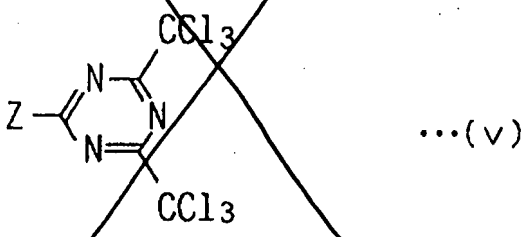


...(III)

wherein R^1 represents either an alkylene group having 1 to 10 carbon atoms which may have a substituent or a group represented by the above general formula (II) (wherein R^4 represents an alkylene group having 1 to 10 carbon atoms which may have a substituent and m represents 0 or 1), the alkylene group may have an oxygen bond (ether bond) in the main chain, R^2 and R^3 each independently represents hydrogen atom or alkyl group having 1 to 3 carbon atoms, and n represents an integer of 1 to 3; and

(B) a compound generating an acid under irradiation, wherein said compound is represented by the following general formulas (VI)

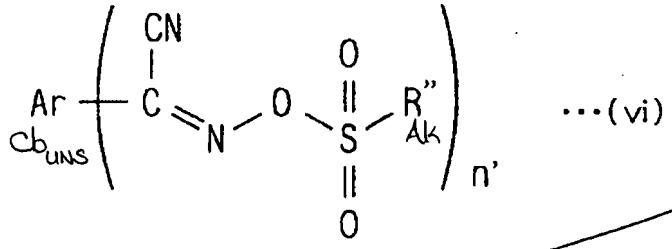
a combination of the compound (iv) and a bis(trichloromethyl)triazine compound represented by the following formula (v):



...(v)

wherein Z represents a 4-alkoxyphenyl group; or

a compound represented by the following formula (vi):



...(vi)

wherein Ar represents a substituted or unsubstituted phenyl group or a naphthyl group; R" represents an alkyl group having 1 to 9 carbon atoms; and n' represents an integer of 2 or 3, in an organic solvent,

wherein the content of an acid component in the photoresist composition is 10 ppm or less.

2. **(Canceled)**

3. **(Canceled)**

4. **(Previously presented)** The chemical amplification type positive photoresist composition according to claim 1, wherein the component (B) is a compound generating an acid under irradiation with i-rays (365 nm).

5. **(Previously presented)** The chemical amplification type positive photoresist composition according to claim 1, which further comprises a basic compound as the component (C).

```
=> FILE REG
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L1              STR

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L3              STR L1
L4            4 S L3
L5           97 S L3 FUL
                SAV L5 LEE036A/A

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L6            0 S L5

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L7           75 S L5
L8           60 S 1840-2003/PY,PRY AND L7

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L9              STR L3

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L11           4 S L9 SSS FUL SUB=L5
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L13          27 S L8 AND L12

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=> D L11 QUE STAT
L3              STR
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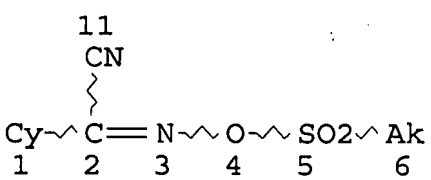

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DEFAULT MLEVEL IS ATOM
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DEFAULT ECLEVEL IS LIMITED

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NUMBER OF NODES IS 7

STEREO ATTRIBUTES: NONE
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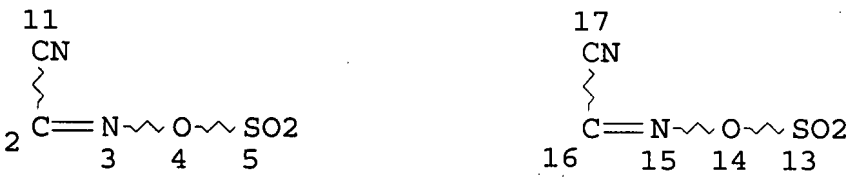
L9 STR



NODE ATTRIBUTES:
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NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE
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=> FILE ZCA
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=> D L13 1-27 BIB ABS HITSTR HITRN

L13 ANSWER 1 OF 27 ZCA COPYRIGHT 2007 ACS on STN
AN 142:325916 ZCA
TI Composition for antireflection film and resist pattern formation
IN Nakayama, Kazuhiko
PA Tokyo Ohka Kogyo Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 28 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2005070154	A	20050317	JP 2003-209378	200308 28

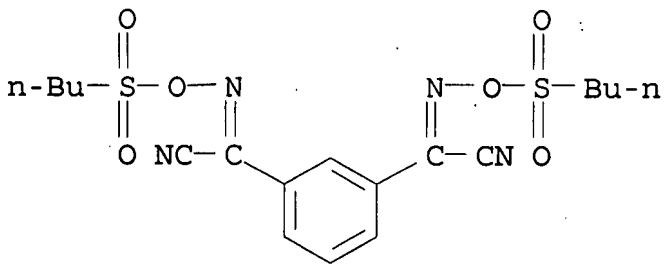
<--

PRAI JP 2003-209378 20030828 <--

AB The compn., for forming the antireflection film under pos.-working photoresist layer, contains (A) a resin, (B) a compd. generating an acid by irradn., (C) a light absorbing agent, and (D) an org. solvent, in which the compn. crosslinks by heating and changes from insol. to sol. in alk. soln. by the action of acid generated from B. The resist pattern is manufd. by the steps of (1) coating the compn. on a support and heating for antireflection film formation, (2) coating the pos. photoresist on the antireflection film and heating, (3) selectively exposing, (4) post-exposure baking, and (5) developing by an aq. alk. soln. Mixing phenomena of the antireflection film and photoresist layer are prevented and the antireflection film can be removed without dry etching process.

IT **195394-90-2**
(acid generator; antireflection film for pos. photoresist pattern formation)

RN 195394-90-2 ZCA
CN 1,3-Benzenediacetonitrile, α,α'-bis[[(butylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



IT **195394-90-2**
(acid generator; antireflection film for pos. photoresist pattern formation)

L13 ANSWER 2 OF 27 ZCA COPYRIGHT 2007 ACS on STN
AN 142:325909 ZCA
TI Lift-off resist material and formation of resist pattern with controlled width of under layer
IN Nakayama, Kazuhiko; Harada, Hisanori; Takagi, Isamu
PA Tokyo Ohka Kogyo Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 28 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

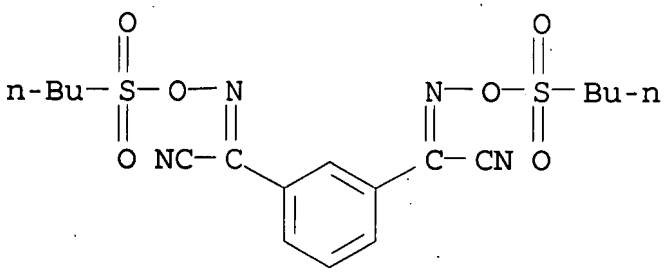
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2005070153	A	20050317	JP 2003-209377	20030828 <--

PRAI JP 2003-209377 20030828 <--

AB The lift-off resist material, comprising (A) a resin, (B) a compd. generating an acid by irradn., and (C) an org. solvent, crosslinks by heating and changes from insol. to sol. in alk. soln. by the action of acid generated from B. The lift-off resist pattern is manufd. by the steps of (1) forming an under resist layer by coating the lift-off resist material on a support and heating, (2) coating an upper resist layer comprising (non) chem. amplification-type pos. resist compn. and heating, (3) selectively exposing, (4) post exposure baking, and (5) developing with an aq. alk. soln. for forming resist pattern with cross section narrow at the interface between the support and the resist layer. The width of the under resist layer is controlled easily.

IT **195394-90-2**
(acid generator; lift-off resist material with under layer contg.

alkali-sol. resin and acid generator)
RN 195394-90-2 ZCA
CN 1,3-Benzenediacetonitrile, α,α'-bis[[(butylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



IT **195394-90-2**
(acid generator; lift-off resist material with under layer contg. alkali-sol. resin and acid generator)

L13 ANSWER 3 OF 27 ZCA COPYRIGHT 2007 ACS on STN
AN 142:144299 ZCA
TI Formation of resist patterns for manufacture of system liquid crystal displays
IN Kurihara, Masaki; Yamaguchi, Toshihiro; Shinkura, Satoshi
PA Tokyo Ohka Kogyo Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 36 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2005010487	A	20050113	JP 2003-174861	20030619
TW 254191	B	20060501	TW 2004-93114120	20040519

<--

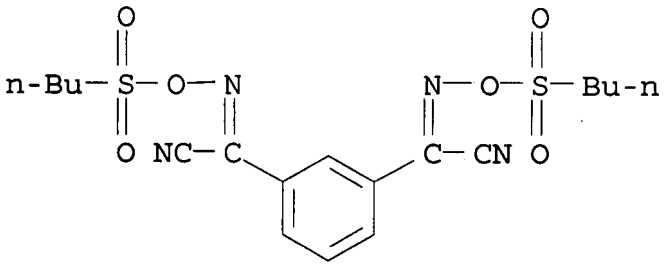
PRAI JP 2003-174861 A 20030619 <--
AB The method involves (1) applying pos. photoresist compns. on substrates, (2) prebaking, (3) forming antireflective films on the resulting resist films, (4) exposing the resist films selectively using masks consisting of mask patterns for formation of ≤2.0-μm resist patterns and mask patterns for formation of >2.0-μm resist patterns, (5) removing the antireflective films, (6) developing the resist films with alkali aq. solns. to give

≤2.0-μm resist patterns for integrated circuits and >2.0-μm resist patterns for liq. crystal display parts. Resist patterns with good dimensional stability are obtained.

IT **195394-90-2**
(acid generators; formation of resist patterns with good dimensional stability for manuf. of system LCD)

RN 195394-90-2 ZCA

CN 1,3-Benzenediacetonitrile, α,α'-bis[[(butylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



IT **195394-90-2**
(acid generators; formation of resist patterns with good dimensional stability for manuf. of system LCD)

L13 ANSWER 4 OF 27 ZCA COPYRIGHT 2007 ACS on STN

AN 142:144067 ZCA

TI Positive photoresist compositions and method for forming resist patterns for system LCD with excellent lineality, resolution, and heat resistance

IN Kurihara, Masaki; Hidesaka, Shinichi; Shinkura, Satoshi

PA Tokyo Ohka Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 39 pp.
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005010215	A	20050113	JP 2003-171029	20030616
KR 2004111039	A	20041231	KR 2004-43715	20040614

PRAI JP 2003-171029 A 20030616 <--

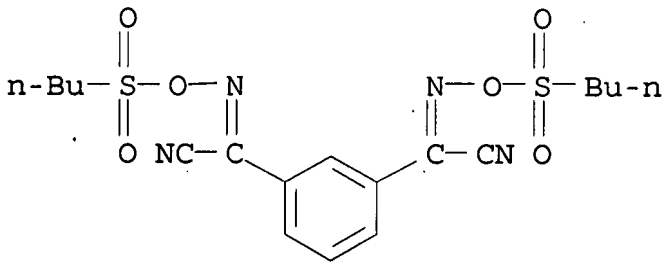
OS MARPAT 142:144067

AB The compns. contain alkali-sol. polymers or alkali-insol. polymers which become alkali-sol. by acids, wherein the polymers are purified using ion-exchange resins before compn. prepn. The method contains applying the compns. on substrates, prebaking them, selectively exposing the resist films via masks with patterns of ≤2.0 μm and those of >2.0 μm, post-exposure baking them, and developing them in alk. solns., thus giving resist patterns for IC and those for LCD units simultaneously.

IT **195394-90-2**
(photoacid generator; pos. photoresists contg. purified alkali-sol. polymers and quinonediazide esters for system LCD manuf.)

RN 195394-90-2 ZCA

CN 1,3-Benzenediacetonitrile, α,α'-bis[[(butylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



IT **195394-90-2**
(photoacid generator; pos. photoresists contg. purified alkali-sol. polymers and quinonediazide esters for system LCD manuf.)

L13 ANSWER 5 OF 27 ZCA COPYRIGHT 2007 ACS on STN

AN 142:103184 ZCA

TI Chemically amplified positive photoresist compositions and method for forming resist patterns for system LCD with excellent heat resistance and sensitivity

IN Nakagawa, Yusuke; Hidesaka, Shinichi; Miyagi, Masaru; Harada, Hisanobu

PA Tokyo Ohka Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 22 pp.
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005010213	A	20050113	JP 2003-171027	

KR 2004111034 A 20041231 KR 2004-43440 200306 16 200406 14

<-- <--

PRAI JP 2003-171027 A 20030616 <--

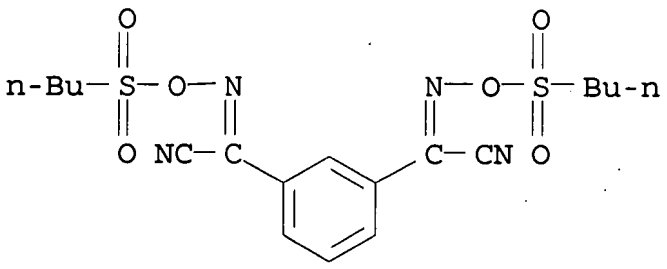
OS MARPAT 142:103184

AB The compns. with acid content ≤50 ppm contain alkali-sol. polymers, compds. H2C:CHOR1OCH:CH2 [R1 = (un)substituted C1-10 alkylene, R4mQR4m; R4 = (un)substituted C1-10 alkylene; m = 0, 1], photoacid generators, and org. solvents. The method contains applying the compns. on substrates, prebaking them, selectively exposing the resist films via masks with patterns of ≤2.0 μm and those of >2.0 μm, post-exposure baking them, and developing them in alk. solns., thus giving resist patterns for IC and those for LCD units simultaneously.

IT **195394-90-2**
(photoacid generator; chem. amplified pos. photoresists for forming IC and LCD patterns on substrates simultaneously with good heat resistance and sensitivity)

RN 195394-90-2 ZCA

CN 1,3-Benzenediacetonitrile, α,α'-bis[[(butylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



IT **195394-90-2**
(photoacid generator; chem. amplified pos. photoresists for forming IC and LCD patterns on substrates simultaneously with good heat resistance and sensitivity)

L13 ANSWER 6 OF 27 ZCA COPYRIGHT 2007 ACS on STN

AN 142:65299 ZCA

TI Chemically amplified positive photoresists with good linearity of resolution and patterning thereof

IN Nakayama, Kazuhiko; Takagi, Isamu

PA Tokyo Ohka Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 27 pp.
CODEN: JKXXAF

DT Patent
LA Japanese
FAN.CNT 1

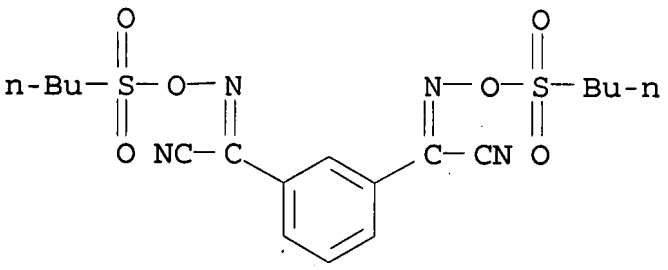
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004354610	A	20041216	JP 2003-151084	200305 28
	KR 2004104380	A	20041210	KR 2004-34836	200405 17
	CN 1573549	A	20050202	CN 2004-10044681 <--	200405 19

PRAI JP 2003-151084 A 20030528 <--

AB The photoresists, having good sensitivity and heat resistance, comprise resins increasing soly. in aq. alk. solns. by acid action, radiation-sensitive acid generators, and org. solvents and polystyrene-converted Mw (GPC detd.) 3000-100,000. The photoresists are applied on substrates, prebaked, exposed through masks possessing ≤2.0-μm patterns and >2.0-μm patterns, baked, and developed with aq. alkali developers to form resist patterns of ≤2.0-μm resoln. for IC and those of >2.0-μm resoln. for LCD simultaneously.

IT **195394-90-2**
(radiation-sensitive acid generators; chem. amplified pos. photoresists contg. mol. wt.-regulated resins and with good linearity of resoln. for IC-mounted LCD substrates)

RN 195394-90-2 ZCA
CN 1,3-Benzenediacetonitrile, α,α'-bis[[(butylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



IT **195394-90-2**
(radiation-sensitive acid generators; chem. amplified pos. photoresists contg. mol. wt.-regulated resins and with good

linearity of resoln. for IC-mounted LCD substrates)

L13 ANSWER 7 OF 27 ZCA COPYRIGHT 2007 ACS on STN
AN 142:65298 ZCA
TI Chemically amplified positive photoresists for system LCD and their patterning
IN Hidesaka, Shinichi; Kurihara, Masaki; Nakagawa, Yusuke; Tate, Toshiaki
PA Tokyo Ohka Kogyo Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 20 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

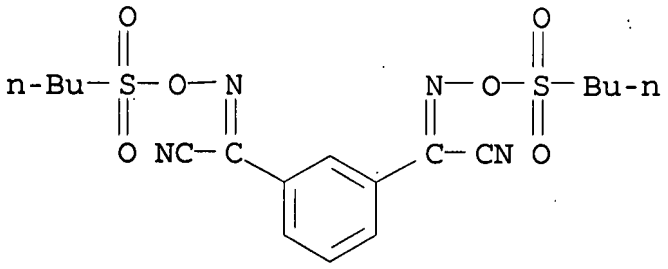
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004354609	A	20041216	JP 2003-151083	20030528
CN 1573551	A	20050202	CN 2004-10045733	20040524 <--
KR 2004103320	A	20041208	KR 2004-37423	20040525 <--

PRAI JP 2003-151083 A 20030528 <--

AB The photoresists comprise (A) alkali-insol. novolaks prepd. from alkali-sol. novolaks and R1(OCH:CH2)2 [R1 = C1-10 alkylene, R4mQR4m (R4 = C1-10 alkylene; m = 0, 1; Q = cyclohexylene)] and increasing soly. in aq. alkali solns. by acid action, (C) radiation-sensitive acid generators, and (D) org. solvents. The photoresists are applied on substrates, prebaked, exposed through masks contg. ≤2.0-μm and >2.0-μm-resoln. patterns, baked, and developed to form IC patterns and patterns for LCD, simultaneously.

IT **195394-90-2**
(radiation-sensitive acid generators; chem. amplified pos. photoresists contg. vinyloxymethyl ether-bridged novolaks for system LCD)

RN 195394-90-2 ZCA
CN 1,3-Benzenediacetonitrile, α,α'-bis[[(butylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



IT **195394-90-2**
(radiation-sensitive acid generators; chem. amplified pos. photoresists contg. vinyloxymethyl ether-bridged novolaks for system LCD)

L13 ANSWER 8 OF 27 ZCA COPYRIGHT 2007 ACS on STN
AN 142:45896 ZCA
TI Chemically amplified positive photoresist composition and method for forming resist pattern
IN Nakagawa, Yusuke; Hidesaka, Shinichi; Maruyama, Kenji; Shimatani, Satoshi; Masujima, Masahiro; Nitta, Kazuyuki
PA Tokyo Ohka Kogyo Co., Ltd., Japan
SO PCT Int. Appl., 52 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2004104703	A1	20041202	WO 2004-JP7206	20040520

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RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

CN 1701280	A	20051123	CN 2004-80000888	

200405
20
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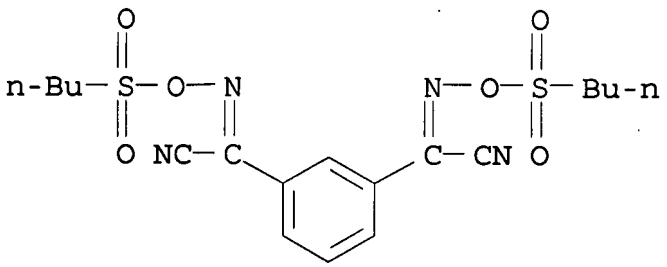
US 2006003260 A1 20060105 US 2005-528617
200503
21
<--
PRAI JP 2003-144700 A 20030522 <--
JP 2003-426503 A 20031224 <--
WO 2004-JP7206 W 20040520

AB The disclosed chem. amplified pos. photoresist compn. comprises an alkali-sol. resin contg. a hydroxystyrene based constituting unit and a styrene based constituting unit, crosslinking agent, an acid generator, and an org. solvent. and a method for forming a resist pattern which comprises using the resist compn. The disclosed method for forming a resist pattern uses the resist compn. The photo resist compn. can form a resist exhibiting high sensitivity, high heat resistance and high resoln. (high contrast) and being reduced in undulation phenomenon.

IT **195394-90-2**
(acid generator; pos. photoresist compn. contg. cross linking agent and hydroxystyrene copolymer and)

RN 195394-90-2 ZCA

CN 1,3-Benzenediacetonitrile, α,α'-bis[[(butylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



IT **195394-90-2**
(acid generator; pos. photoresist compn. contg. cross linking agent and hydroxystyrene copolymer and)

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 9 OF 27 ZCA COPYRIGHT 2007 ACS on STN

AN 142:45895 ZCA

TI Chemically amplified positive photo resist composition and method for forming resist pattern

IN Maruyama, Kenji; Kurihara, Masaki; Miyagi, Ken; Niikura, Satoshi; Shimatani, Satoshi; Masujima, Masahiro; Nitta, Kazuyuki; Yamaguchi,

Toshihiro; Doi, Kosuke
PA Tokyo Ohka Kogyo Co., Ltd., Japan
SO PCT Int. Appl., 79 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004104702	A1	20041202	WO 2004-JP7139	20040519 <--
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	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	DE 112004000021	T5	20050728	DE 2004-112004000021	20040519 <--
	CN 1698016	A	20051116	CN 2004-80000692	20040519 <--
	US 2005244740	A1	20051103	US 2005-522036	20050119 <--
	US 2007117045	A1	20070524	US 2007-622988	20070112 <--

PRAI JP 2003-141805 A 20030520 <--
JP 2003-426503 A 20031224 <--
WO 2004-JP7139 W 20040519
US 2005-522036 A1 20050119

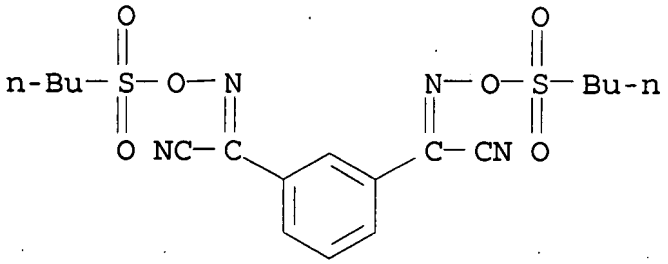
AB The disclosed chem. amplified pos. photoresist compn. which comprises an org. solvent and, dissolved therein, a resin being

prepd. through the reaction of a novolac resin or a hydroxystyrene resin with a crosslinking agent, being slightly sol. or insol. in an alk. aq. soln. and exhibiting enhanced soly. into an aq. alkali soln. in the presence of an acid, and (B) a compd. generating an acid by the irradn. with a radiation, wherein it contains an acid component in a amt. of 10 ppm or less. The chem. amplified pos. photoresist compn. can form a resist exhibiting good storage stability as a resist soln. in a bottle.

IT **195394-90-2**
(acid generator; pos. photoresist compn. contg. crosslinked phenolic resin and)

RN 195394-90-2 ZCA

CN 1,3-Benzenediacetonitrile, α,α'-bis[[(butylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



IT **195394-90-2**
(acid generator; pos. photoresist compn. contg. crosslinked phenolic resin and)

RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 10 OF 27 ZCA COPYRIGHT 2007 ACS on STN

AN 142:30021 ZCA

TI Chemical amplification-type photoresist laminate, its manufacture, pattern formation, and manufacture of connection terminal

IN Washio, Yasushi; Saito, Koji

PA Tokyo Ohka Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 19 pp.
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2004347951	A	20041209	JP 2003-146231	200305 23

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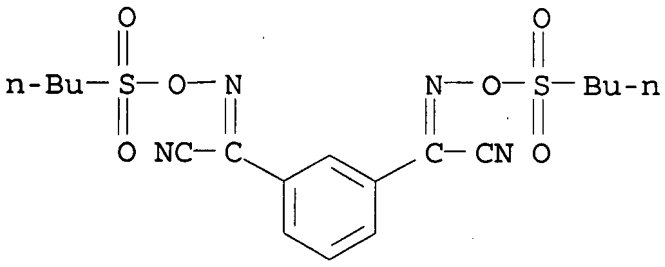
PRAI JP 2003-146231 20030523 <--

AB The photoresist compn. contains (A) a resin whose soly. to alk. soln. changes by acid, (B) a compd. generating acid by irradn., and (C) a rust prevention agent, and the compn. is manufd. by mixing A, B, and C. The laminate comprises a support coated with the photoresist compn. Photoresist pattern is formed by (1) forming the photoresist laminate and (2) selectively exposing and developing. Connection terminal comprising a conductive material is formed on non-resist part of the pattern. The photoresist laminate shows good storage stability without changing alkali-soly. before radiation.

IT **195394-90-2**
(acid generator; chem. amplification photoresist compn. contg. rust preventing agent)

RN 195394-90-2 ZCA

CN 1,3-Benzenediacetonitrile, α,α'-bis[[(butylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



IT **195394-90-2**
(acid generator; chem. amplification photoresist compn. contg. rust preventing agent)

L13 ANSWER 11 OF 27 ZCA COPYRIGHT 2007 ACS on STN

AN 142:30020 ZCA

TI Chemical amplification-type photoresist laminate, its manufacture, pattern formation, and manufacture of connection terminal

IN Washio, Yasushi; Saito, Koji

PA Tokyo Ohka Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 17 pp.
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2004347950	A	20041209	JP 2003-146230	200305

23

WO 2006059392 A1 20060608 WO 2004-JP18032 200412 03 <--

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RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

CN 1842741 A 20061004 CN 2004-80005670 200412 03

EP 1818722 A1 20070815 EP 2004-821365 200412 03

R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR

PRAI JP 2003-146230 A 20030523 <--

WO 2004-JP18032 W 20041203

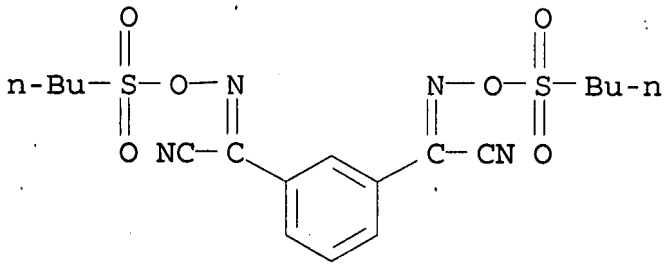
AB In manuf. of the photoresist laminate, a support with partially or wholly coated with Cu layer is oxidized for Cu oxide layer formation, then coated with the chem. amplification-type photoresist layer contg. (A) a resin whose soly. to alk. soln. changes by acid and (B) a compd. generating acid by irradn. Photoresist pattern is formed by (1) forming the photoresist laminate and (2) selectively exposing and developing. Connection terminal comprising a conductive material is formed on non-resist part of the pattern. The photoresist laminate shows good storage stability without changing alkali-soly. before radiation.

IT **195394-90-2**

(acid generator; chem. amplification photoresist laminate on support with copper oxide layer for connection terminal manuf.)

RN 195394-90-2 ZCA

CN 1,3-Benzenediacetonitrile, α,α'-bis[[(butylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



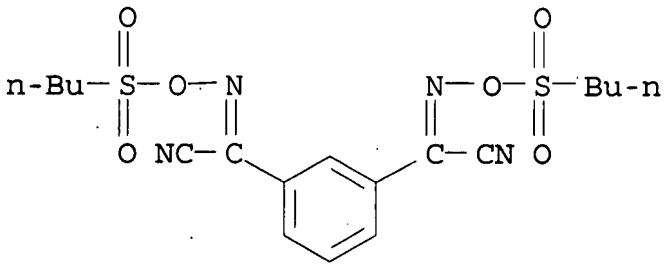
IT **195394-90-2**
(acid generator; chem. amplification photoresist laminate on support with copper oxide layer for connection terminal manuf.)

L13 ANSWER 12 OF 27 ZCA COPYRIGHT 2007 ACS on STN
AN 142:30019 ZCA
TI Chemically amplified positive photoresist compositions with good storage stability and patterning thereon
IN Nakagawa, Yusuke; Hidesaka, Shinichi
PA Tokyo Ohka Kogyo Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 20 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004347852	A	20041209	JP 2003-144699	20030522 <--

PRAI JP 2003-144699 20030522 <--
OS MARPAT 142:30019
AB The compns. comprise (A) alkali-sol. resins bearing OH groups in sidechains, (B) compds. H2C:CHOR1OCH:CH2 [R1 = C1-10 alkylene, R4mQR4m (R4 = C1-10 alkylene; m = 0, 1; Q = cyclohexylene)], (C) radiation-sensitive acid generators, (D) NXYZ (X-Z = C≥4 alkyl, C≥3 cycloalkyl, and/or aralkyl for ≥1 of them and C≤3 alkyl and/or H for the remainders), and org. solvents. The compns. achieve extremely high heat resistance, less time degrdn. of sensitivity, and high resoln. The compns. are applied on substrates at 1.5-7.0-μm thickness, patternwise exposed, baked, and developed with aq. alkalis to form patterns.
IT **195394-90-2**
(radiation-sensitive acid generators; chem. amplified pos. photoresists contg. alkylamines and showing high resoln. and good

heat resistance)
RN 195394-90-2 ZCA
CN 1,3-Benzenediacetonitrile, α,α'-bis[[(butylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



IT **195394-90-2**
(radiation-sensitive acid generators; chem. amplified pos. photoresists contg. alkylamines and showing high resoln. and good heat resistance)

L13 ANSWER 13 OF 27 ZCA COPYRIGHT 2007 ACS on STN
AN 141:403470 ZCA
TI Chemical amplification positive-working photoresist composition, its thick laminate, formation of thick resist pattern and connection terminal
IN Okui, Toshiki; Misumi, Koichi
PA Tokyo Ohka Kogyo Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 23 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2004309777	A	20041104	JP 2003-102957	20030407 <--
PRAI JP 2003-102957		20030407 <--		

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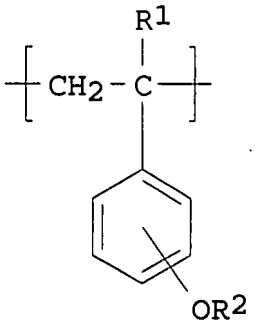

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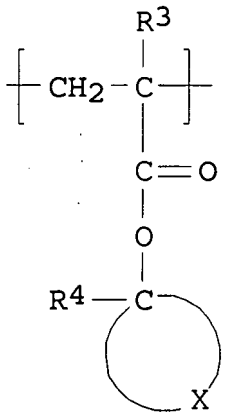


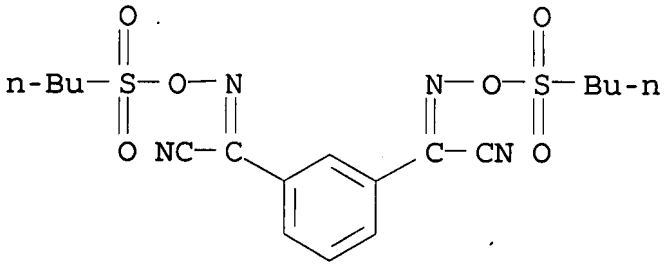
II

AB The compn. contains (A) a compd. generating an acid by the action of actinic ray or irradn. and (B) a resin compn.,. whose soly. to alkali increases by the action of the acid, contg. (b1) a resin with structural unit I (R1 = H, Me; R2 = acid labile group) and (b2) a resin with structural unit II (R3 = H, Me; R4 = C1-4 alkyl; X = atoms to form 5- to 20-membered hydrocarbon ring). The laminate comprises a support and 10-150 μm-thick layer of the photoresist. The thick resist pattern is manufd. by (1) forming the photoresist laminate, (2) selectively irradiating the actinic ray or radiation, and (3) developing the resist. Conductive connection terminal is formed on the non-resist area of the pattern. The compn. shows high resoln., good developability, and plating resistance.

IT **195394-90-2**
(acid generator; chem. amplification thick photoresist compn. for connection terminal formation)

RN 195394-90-2 ZCA

CN 1,3-Benzenediacetonitrile, α,α'-bis[[(butylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



IT **195394-90-2**
(acid generator; chem. amplification thick photoresist compn. for

connection terminal formation)

L13 ANSWER 14 OF 27 ZCA COPYRIGHT 2007 ACS on STN
AN 141:386396 ZCA
TI Chemical amplification positive-working photoresist composition, its thick laminate, formation of thick resist pattern and connection terminal
IN Okui, Toshiki; Misumi, Koichi; Saito, Koji
PA Tokyo Ohka Kogyo Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 21 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004309776	A	20041104	JP 2003-102956	20030407

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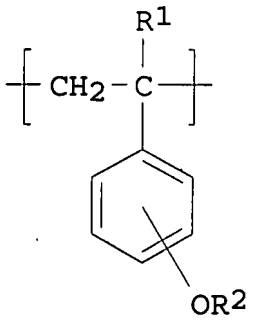
PRAI JP 2003-102956 20030407 <--
GI



I

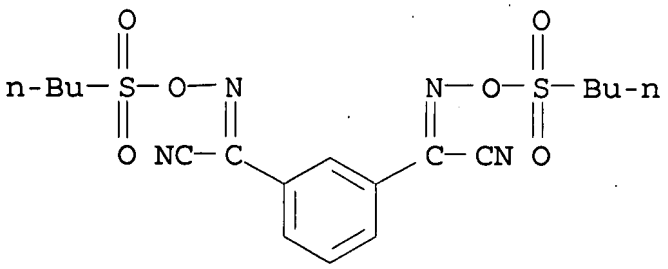
AB The compn. contains (A) a compd. generating an acid by the action of actinic ray or irradn., (B) a resin with structural unit I (R1 = H, Me; R2 = acid labile group) and whose soly. to alkali increases by the action of the acid, and (C) an alkali-sol. resin. The laminate comprises a support and 10-150 μm-thick layer of the photoresist. The thick resist pattern is manufd. by (1) forming the photoresist laminate, (2) selectively irradiating the actinic ray or radiation, and (3) developing the resist. Connection terminal is formed on the non-resist area of the pattern. The compn. shows high contrast,

gives clear patterns, and good plating resistance.

IT **195394-90-2**
(acid generator; chem. amplification-type thick photoresist compn. for manuf. of connection terminal)

RN 195394-90-2 ZCA

CN 1,3-Benzenediacetonitrile, α,α'-bis[[(butylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



IT **195394-90-2**
(acid generator; chem. amplification-type thick photoresist compn. for manuf. of connection terminal)

L13 ANSWER 15 OF 27 ZCA COPYRIGHT 2007 ACS on STN

AN 141:386395 ZCA

TI Chemical amplification positive-working photoresist composition, its thick laminate, formation of thick resist pattern and connection terminal

IN Okui, Toshiki; Misumi, Koichi

PA Tokyo Ohka Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 23 pp.
CODEN: JKXXAF

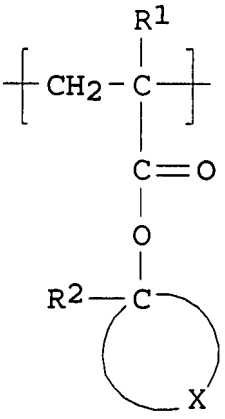
DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2004309775	A	20041104	JP 2003-102955	20030407
			<--	
PRAI JP 2003-102955		20030407	<--	

GI



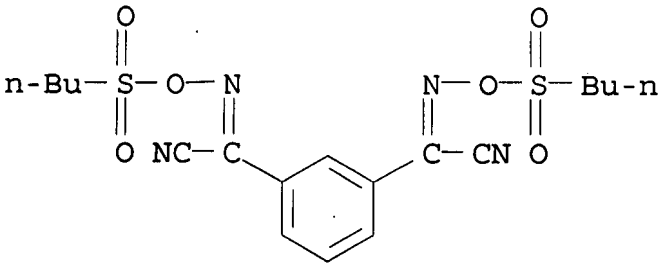
I

AB The compn. contains (A) a compd. generating an acid by the action of actinic ray or irradn., (B) a resin with structural unit I (R1 = H, Me; R2 = lower alkyl; X = atoms to form 5- to 20-membered hydrocarbon ring) and whose soly. to alkali increases by the action of the acid, and (C) an alkali-sol. resin. The laminate comprises a support and 10-150 μm-thick layer of the photoresist. The thick resist pattern is manufd. by (1) forming the photoresist laminate, (2) selectively irradiating the actinic ray or radiation, and (3) developing the resist. Connection terminal is formed on the non-resist area of the pattern. The compn. shows high contrast, gives clear patterns, and good plating resistance.

IT **195394-90-2**
(acid generator; chem. amplification thick photoresist compn. for manuf. of connection terminal)

RN 195394-90-2 ZCA

CN 1,3-Benzenediacetonitrile, α,α'-bis[[(butylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



IT **195394-90-2**
(acid generator; chem. amplification thick photoresist compn. for

manuf. of connection terminal)

L13 ANSWER 16 OF 27 ZCA COPYRIGHT 2007 ACS on STN
AN 141:372780 ZCA
TI Chemical amplification positive-working photoresist composition, its thick laminate, formation of thick resist pattern and connection terminal
IN Okui, Toshiki; Misumi, Koichi
PA Tokyo Ohka Kogyo Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 23 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004309778	A	20041104	JP 2003-102958	20030407

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PRAI JP 2003-102958 20030407 <--
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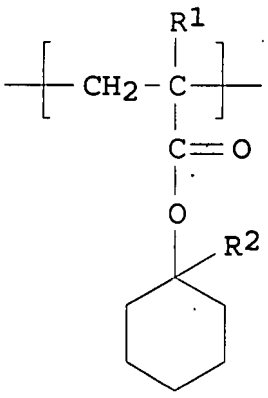


I

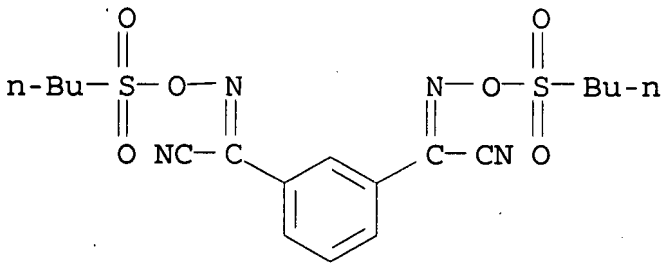
AB The compn. contains (A) a compd. generating an acid by the action of actinic ray or irradn. and (B) a resin with structural unit I (R1 = H, Me; R2 = lower alkyl), whose soly. to alkali increases by the action of the acid. The laminate comprises a support and 10-150 μm-thick layer of the photoresist. The thick resist pattern is manufd. by (1) forming the photoresist laminate, (2) selectively

irradiating the actinic ray or radiation, and (3) developing. Conductive connection terminal is formed on the non-resist area of the pattern. The compn. shows high contrast, gives clear patterns, and good plating resistance.

IT **195394-90-2**
(acid generator; chem. amplification thick photoresist compn. for manuf. of connection terminal)

RN 195394-90-2 ZCA

CN 1,3-Benzenediacetonitrile, α,α'-bis[[(butylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



IT **195394-90-2**
(acid generator; chem. amplification thick photoresist compn. for manuf. of connection terminal)

L13 ANSWER 17 OF 27 ZCA COPYRIGHT 2007 ACS on STN

AN 140:415085 ZCA

TI Positive-working photoresist composition and resist pattern formation for manufacture of liquid crystal display

IN Katano, Akira; Tate, Toshiaki; Miyagi, Masaru

PA Tokyo Ohka Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 18 pp.
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004144905	A	20040520	JP 2002-308477	20021023
TW 256524	B	20060611	TW 2003-92128445	20031014
KR 2004036560	A	20040430	KR 2003-72491 <--	200310

17

<--

CN 1497347 A 20040519 CN 2003-10101490

200310
21

<--

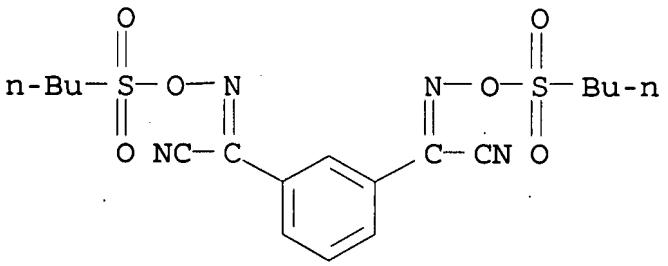
PRAI JP 2002-308477 A 20021023 <--

AB The compn. contains (A) an alkali-sol. resin contg. novolak resin with 100-400 nm/s soly. to 2.38 wt.% tetramethylammonium hydroxide aq. soln., (B) a compd. generating acid by irradn., and (C) a crosslinkable polyvinyl ether. Resist patten is formed by the steps of (1) coating the compn. on a substrate and pre-baking, (2) selectively exposing the resist film through a mask with ≤2.0 and >2.0 nm patterns, (3) post exposure baking, (4) developing the resist film by aq. alkali soln. for simultaneously forming ≤2.0 pattern for integrated circuits and >2.0 nm pattern for liq. crystal displays, and (5) rinsing for washing the developer. High resoln. resist pattern is obtained even under low numerical aperture exposure conditions.

IT **195394-90-2**
(acid generator; photoresist compn. contg. novolak resin, acid generator and polyvinyl ether for manuf. of liq. crystal display)

RN 195394-90-2 ZCA

CN 1,3-Benzenediacetonitrile, α,α'-bis[[(butylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



IT **195394-90-2**
(acid generator; photoresist compn. contg. novolak resin, acid generator and polyvinyl ether for manuf. of liq. crystal display)

L13 ANSWER 18 OF 27 ZCA COPYRIGHT 2007 ACS on STN

AN 138:360407 ZCA

TI Thick film photoresist layer laminate, method of manufacturing thick film resist pattern, and method of manufacturing connecting terminal

IN Saito, Koji; Washio, Yasushi; Okui, Toshiki

PA Tokyo Ohka Kogyo Co., Ltd., Japan

SO U.S. Pat. Appl. Publ., 7 pp.
CODEN: USXXCO

DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003087187	A1	20030508	US 2002-283513	20021030
	JP 2003140347	A	20030514	JP 2001-338474 <--	20011102
	TW 227811	B	20050211	TW 2002-91125261 <--	20021025

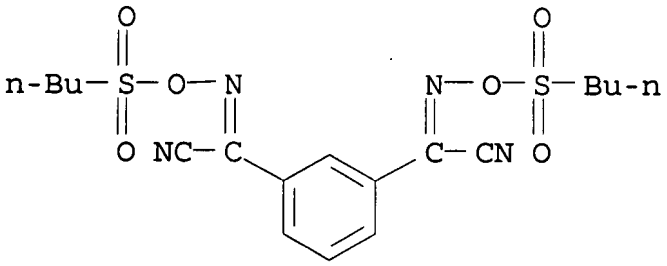
PRAI JP 2001-338474 A 20011102 <--

AB A thick film photoresist layer laminate comprises a substrate (a), and a thick film photoresist layer (b) contg. a resin whose alkali soly. changes due to the action of an acid, and an acid generator, which are laminated via a shield layer (c) which prevents the substrate (a) from contacting the thick film photoresist layer (b). A method of forming a thick film resist pattern and a method of making a connecting terminal are also claimed.

IT **195394-90-2**
(chem. amplified photoresist compn. for thick film photoresist laminate)

RN 195394-90-2 ZCA

CN 1,3-Benzenediacetonitrile, α,α'-bis[[(butylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



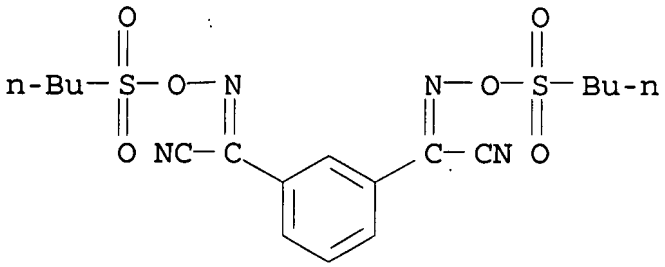
IT **195394-90-2**
(chem. amplified photoresist compn. for thick film photoresist laminate)

L13 ANSWER 19 OF 27 ZCA COPYRIGHT 2007 ACS on STN

AN 138:195891 ZCA
TI Chemically amplified negative photoresist composition for the formation of thick films, photoresist base material and method of forming bumps
IN Washio, Yasushi; Saito, Koji; Okui, Toshiki; Komano, Hiroshi
PA Tokyo Ohka Kogyo Co., Ltd., Japan
SO U.S. Pat. Appl. Publ., 11 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2003039921	A1	20030227	US 2002-194298	20020715 <--
US 6838229	B2	20050104		
JP 2003114531	A	20030418	JP 2002-110283	20020412 <--
JP 3753424	B2	20060308		
TW 242689	B	20051101	TW 2002-91108855	20020429 <--
DE 10234668	A1	20030227	DE 2002-10234668	20020730 <--
PRAI JP 2001-229680	A	20010730 <--		

OS MARPAT 138:195891
AB A chem. amplified neg. photoresist compn. is used for the formation of thick films having a thickness of 20-150 μm and includes (A) an alkali-sol. resin, (B) a compd. which generates an acid upon irradn. with active light or radiant ray, and (C) a compd. which serves as a crosslinking agent in the presence of an acid. The alkali-sol. resin (A) includes a novolak resin having a wt. av. mol. wt. of 5000-10000, and a polymer contg. at least a hydroxystyrene constitutional unit and having a wt. av. mol. wt. of ≤ 5000.
IT **195394-90-2**
(acid generator; chem. amplified neg. photoresist compn. for formation of thick films contg.)
RN 195394-90-2 ZCA
CN 1,3-Benzenediacetonitrile, α,α'-bis[[(butylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



IT **195394-90-2**
(acid generator; chem. amplified neg. photoresist compn. for formation of thick films contg.)
RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 20 OF 27 ZCA COPYRIGHT 2007 ACS on STN
AN 138:9655 ZCA
TI Negative photoresist compositions, photoresist films and their use
IN Saito, Koji; Misumi, Kouichi; Okui, Toshiki; Komano, Hiroshi
PA Tokyo Ohka Kogyo Co., Ltd., Japan
SO Ger. Offen., 12 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 10222387	A1	20021128	DE 2002-10222387 <--	20020521
	JP 2003043688	A	20030213	JP 2002-110282 <--	20020412
	JP 3710758	B2	20051026		
	TW 594390	B	20040621	TW 2002-91109161 <--	20020502
	US 2003064319	A1	20030403	US 2002-147984 <--	20020520
	US 7063934	B2	20060620		

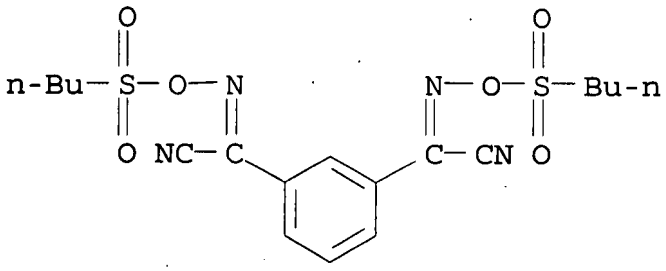
JP 2005309451	A	20051104	JP 2005-134022	200505 02
			<--	
JP 3895353	B2	20070322		
KR 2005089754	A	20050908	KR 2005-68444	200507 27
			<--	
US 2006035169	A1	20060216	US 2005-258273	200510 26
			<--	
US 2006035170	A1	20060216	US 2005-258274	200510 26
			<--	
US 7129018	B2	20061031		
PRAI JP 2001-151131	A	20010521	<--	
JP 2002-110282	A3	20020412	<--	
KR 2002-27420	A3	20020517	<--	
US 2002-147984	A3	20020520	<--	

AB The invention relates to a neg. photoresist compn., which is used for forming thick films and comprises a novolak resin, a plasticizer, a crosslinking agent and an acid generator. This compn. is applied on a substrate and results in a 5-10 μm thick photoresist film. The compn. is homogeneously applied on a substrate of an electronic part, a mask pattern is formed, the pattern is developed, and finally the pattern is removed.

IT **195394-90-2**
(acid generator; neg. photoresist compns., photoresist films and their use for electronic device fabrication)

RN 195394-90-2 ZCA

CN 1,3-Benzenediacetonitrile, α,α'-bis[[(butylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



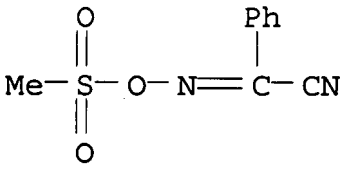
IT **195394-90-2**
(acid generator; neg. photoresist compns., photoresist films and

their use for electronic device fabrication)

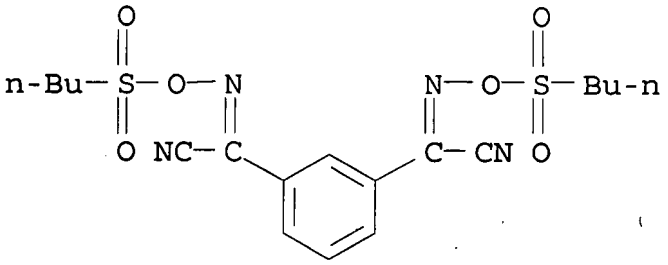
L13 ANSWER 21 OF 27 ZCA COPYRIGHT 2007 ACS on STN
AN 135:144690 ZCA
TI Negative-working resist material and manufacture of ion-implanted substrate using mask prepared from the resist
IN Kanta, Yoshiki; Morio, Kimitaka; Haraguchi, Takayuki
PA Tokyo Ohka Kogyo Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2001209179	A	20010803	JP 2000-344251 <--	20001110
US 6399275	B1	20020604	US 2000-707890 <--	20001108
TW 554251	B	20030921	TW 2000-89124105 <--	20001114
PRAI JP 1999-323629	A	19991115 <--		

OS MARPAT 135:144690
AB The resist material comprises a chem.-amplified neg.-working resist compn. contg. (A1) an alkali-sol. m-cresol novolak resin or (A2) a mixt. of m-cresol-novolak and poly(hydroxystyrene), (B) a compd. generating an acid by irradn., (C) a crosslinking agent having ≥1 hydroxyalkyl group and lower alkoxyalkyl group, and optionally (D) lower aliph. amines and (E) carboxylic acids, and has film thickness 4.0-10.0 μm. An ion-implanted substrate is manufd. using a mask having a resist pattern prepd. by selective exposure of the above neg. resist material, heating, and development with an alkali. The resist pattern has high heat resistance and good profile suitable for a mask.
IT **68272-53-7 195394-90-2**
(photoacid generator; neg.-working resist material contg. m-cresol novolak and manuf. of ion-implanted substrate using mask prepd. from the resist)
RN 68272-53-7 ZCA
CN Benzeneacetonitrile, α-[[(methylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



RN 195394-90-2 ZCA
CN 1,3-Benzenediacetonitrile, α,α'-bis[[(butylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



IT **68272-53-7 195394-90-2**
(photoacid generator; neg.-working resist material contg. m-cresol novolak and manuf. of ion-implanted substrate using mask prepd. from the resist)

L13 ANSWER 22 OF 27 ZCA COPYRIGHT 2007 ACS on STN
AN 133:230461 ZCA
TI Oxime derivatives and the use thereof as photoinitiators
IN Kura, Hisatoshi; Yamato, Hitoshi; Ohwa, Masaki; Dietliker, Kurt
PA Ciba Specialty Chemicals Holding Inc., Switz.
SO PCT Int. Appl., 84 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2000052530	A1	20000908	WO 2000-EP1404	20000221

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SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1163553	A1	20011219	EP 2000-920439	200002 21	<--
EP 1163553	B1	20060614			
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JP 2002538241	T	20021112	JP 2000-602686	200002 21	<--
EP 1635220	A2	20060315	EP 2005-111899	200002 21	<--
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AT 330254	T	20060715	AT 2000-920439	200002 21	<--
US 6806024	B1	20041019	US 2001-914433	200108 27	<--

PRAI EP 1999-810180 A 19990303 <--
EP 2000-920439 A3 20000221 <--
WO 2000-EP1404 W 20000221 <--
OS MARPAT 133:230461
GI

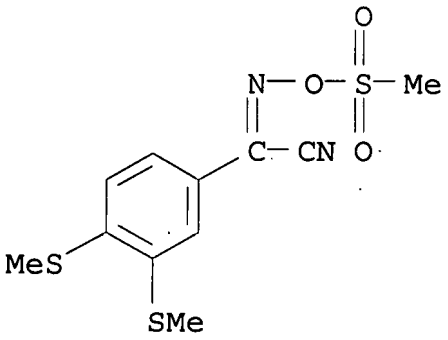
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB This patent disclosed radically photopolymerizable compns. suitable for prepn. of color filter systems, comprising at least one ethylenically unsatd. photopolymerizable compd., at least one compd. as photoinitiator of formulas I, II, III, IV, V, and/or IV (m = 0, 1; n = 0, 1, 2 or 3; p = 1, 2; R1 = Ph, naphthyl, anthracyl or phenanthryl, heteroaryl radical, C2-C12 alkenyl, C4-C8 cycloalkenyl, or C6-C12 bicycloalkenyl; R1' = C2-C12 alkylene, or phenylene; R2

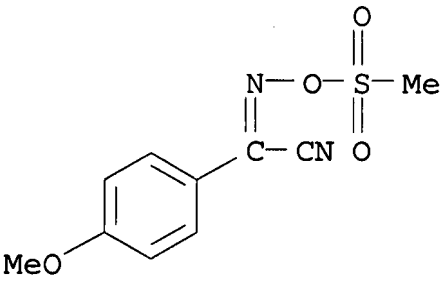
has one of the meanings of R1 or is phenyl; R3 is C1-C18 alkylsulfonyl, or phenyl-C1-C3 alkylsulfonyl if x = 1 , R3 is for example C2-C12 alkylenedisulfonyl if x is 2; R4, R5 = H, halogen, or C1-C8 alkyl; R6, R7, R8 = H, R26Y-, or phenyl; R9 inter alia is C5-C8cycloalkyl, or phenyl; A = -S-, -O-, or -NR10- ; Q = C1-C8-alkylene optionally interrupted by -O-; X = -O- or -NR9-; R10 = H, or phenyl), and at least one coinitiator.

IT **190668-89-4 193222-02-5 195394-89-9 204993-47-5**
(radically photopolymerizable compn. contg.)

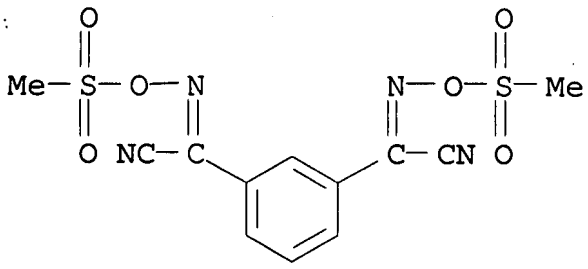
RN 190668-89-4 ZCA
CN Benzeneacetonitrile, α-[[(methylsulfonyl)oxy]imino]-3,4-bis(methylthio)- (9CI) (CA INDEX NAME)



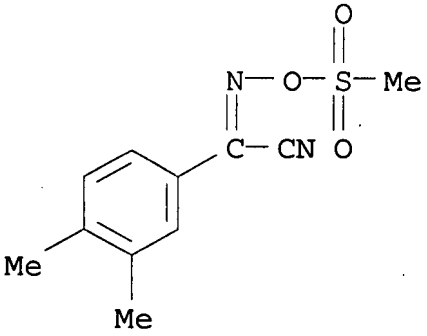
RN 193222-02-5 ZCA
CN Benzeneacetonitrile, 4-methoxy-α-[[(methylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



RN 195394-89-9 ZCA
CN 1,3-Benzenediacetonitrile, α,α'-bis[[(methylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



RN 204993-47-5 ZCA
CN Benzeneacetonitrile, 3,4-dimethyl-α-[[(methylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



IT **190668-89-4 193222-02-5 195394-89-9**
204993-47-5
(radically photopolymerizable compn. contg.)
RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 23 OF 27 ZCA COPYRIGHT 2007 ACS on STN
AN 130:160671 ZCA
TI Electron beam negative-working resist composition containing oxime sulfonate composition
IN Ohmori, Katsumi; Ishikawa, Kiyoshi; Haneda, Hideo; Yamazaki, Hiroyuki; Kanda, Yoshiki; Komano, Hiroshi
PA Tokyo Ohka Kogyo Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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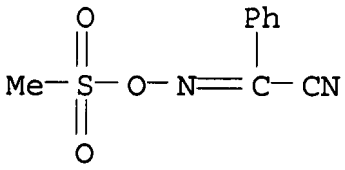
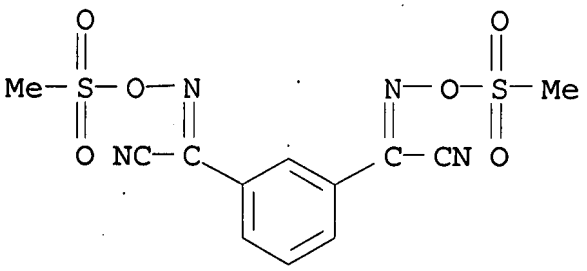
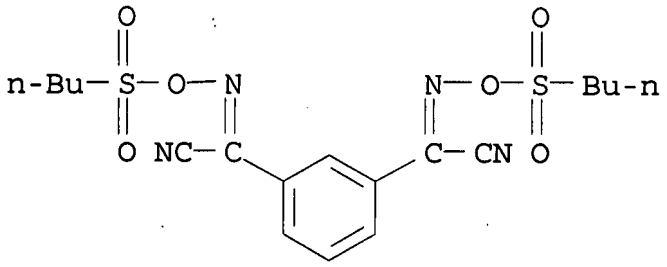
PI JP 11015158 A 19990122 JP 1997-162345 199706 19 <--
JP 3496916 B2 20040216
PRAI JP 1997-162345 19970619 <--
OS MARPAT 130:160671
AB The title resist compn. contains an alkali-sol. resin, ≥1 oxime sulfonate compd. selected from R1C(CN):NOSO2R2 and X[C(CN):NOSO2R3]n [R1 = arom. group; R2 = (halogenated) lower alkyl; R3= (substituted) hydrocarbyl; X = di- or trivalent hydrocarbyl; n = 2, 3], and an acid-crosslinking substance. The compn. shows improved contrast and high sensitivity toward electron beams and provides a high resoln. pattern with good profile.
IT **68272-53-7**, α-(Methylsulfonyloxyimino)phenylacetonitrile **195394-89-9 195394-90-2**
(electron beam neg.-working resist compn. contg. oxime sulfonate compn. of)
RN 68272-53-7 ZCA
CN Benzeneacetonitrile, α-[[(methylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



RN 195394-89-9 ZCA
CN 1,3-Benzenediacetonitrile, α,α'-bis[[(methylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



RN 195394-90-2 ZCA
CN 1,3-Benzenediacetonitrile, α,α'-bis[[(butylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



IT **68272-53-7**, α-(Methylsulfonyloxyimino)phenylacetonitri
le **195394-89-9 195394-90-2**
(electron beam neg.-working resist compn. contg. oxime sulfonate compn. of)

L13 ANSWER 24 OF 27 ZCA COPYRIGHT 2007 ACS on STN
AN 128:328777 ZCA
TI Resist laminate and patterning using it
IN Sato, Mitsuru; Omori, Katsumi; Iguchi, Etsuko; Ishikawa, Kiyoshi; Kaneko, Fumitake; Nakayama, Toshimasa
PA Tokyo Ohka Kogyo Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10090880	A	19980410	JP 1996-239590	19960910 <--
JP 3053072	B2	20000619		
US 5925495	A	19990720	US 1997-924260	19970905 <--
US 6083665	A	20000704	US 1999-273262	19990322 <--

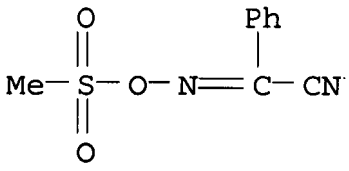
PRAI JP 1996-239590 A 19960910 <--
US 1997-924260 A3 19970905 <--
OS MARPAT 128:328777
AB The resist laminate comprises an antireflective film on a substrate, and a neg.-working resist film contg. an oxime sulfonate-type acid

generator formed on the film. The resist film is selectively irradiated with an actinic ray, heat-treated, developed to form a neg. resist pattern on the reflective film, and the exposed antireflective film was dry-etched using the resist pattern as a mask to form a pattern. The laminate provides high-resoln. patterns with good profile and dimensional stability.

IT **68272-53-7**, α-(Methylsulfonyloxyimino)phenylacetonitrile **193222-02-5**, α-(Methylsulfonyloxyimino)-4-methoxyphenylacetonitrile **195394-89-9**
(neg.-working resist film contg. oxime sulfonate-type acid generator in laminate for patterning)

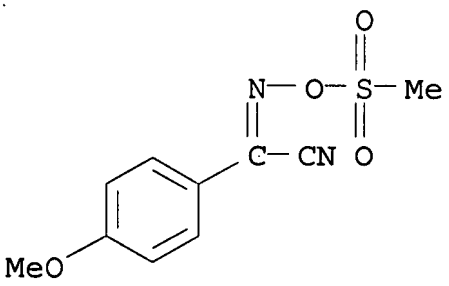
RN 68272-53-7 ZCA

CN Benzeneacetonitrile, α-[[(methylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



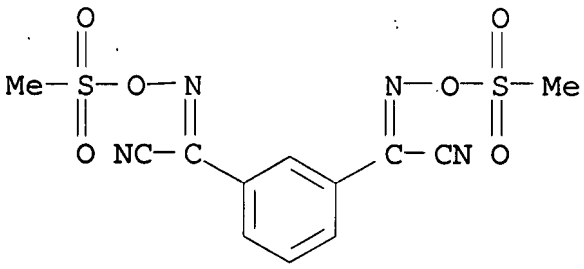
RN 193222-02-5 ZCA

CN Benzeneacetonitrile, 4-methoxy-α-[[(methylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



RN 195394-89-9 ZCA

CN 1,3-Benzenediacetonitrile, α,α'-bis[[(methylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



IT **68272-53-7**, α-(Methylsulfonyloxyimino)phenylacetonitrile **193222-02-5**, α-(Methylsulfonyloxyimino)-4-methoxyphenylacetonitrile **195394-89-9**
(neg.-working resist film contg. oxime sulfonate-type acid generator in laminate for patterning)

L13 ANSWER 25 OF 27 ZCA COPYRIGHT 2007 ACS on STN
AN 128:68506 ZCA
TI Pattern formation using high-sensitive chemical amplification-type resist
IN Haneda, Hideo; Sugata, Yoshiki; Yamazaki, Hiroyuki; Komano, Hiroshi
PA Tokyo Ohka Kogyo Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

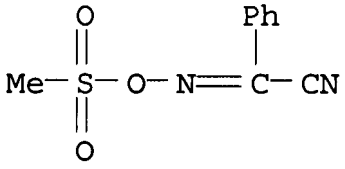
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 09292704	A	19971111	JP 1996-105922	19960425 <--

PRAI JP 1996-105922 19960425 <--
OS MARPAT 128:68506
AB A pattern is formed on a substrate by using a chem. amplification-type resist compn. contg. (A) 100 parts film-forming component whose soly. in alkali is changed by the action of acids and (B) 5-20 parts acid generator (R1O2SON:CCN)nR [I; R = nonreactive org. residue; R1 = (halogenated) lower alkyl; n = 1-3], which has molar extinction coeff. ε ≤100 in i-ray (365 nm), and by irradiating i-ray irradiated at a quantity corresponding to ≤50 mJ/cm2 in conversion into the quantity required to form a resist pattern of line-and-space 0.8 μm. A Si wafer was coated with a resist comprising m-cresol-HCHO novolak resin, a melamine resin, and I (R = m-C6H4; R1 = Me; n = 2;

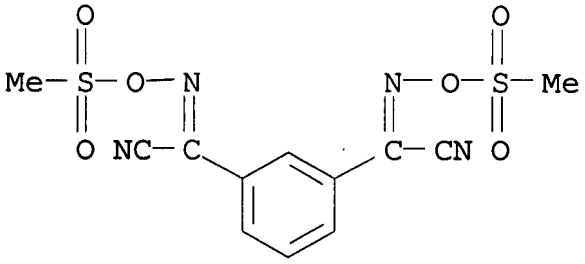
ε = 20), patternwise exposed with i-ray, post-baked, and developed to form a pattern with good profile, dimensional stability, and thermal resistance.

IT **68272-53-7 195394-89-9 195394-90-2**
(chem. amplified resist pattern formation using oxime sulfonate as acid generator)

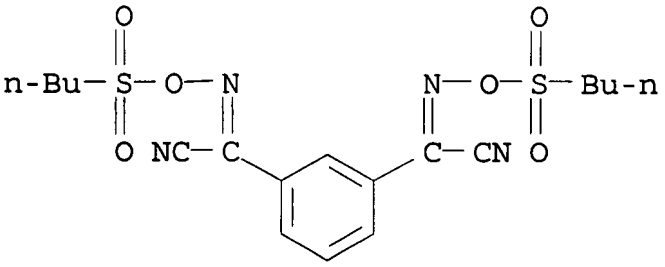
RN 68272-53-7 ZCA
CN Benzeneacetonitrile, α-[[(methylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



RN 195394-89-9 ZCA
CN 1,3-Benzenediacetonitrile, α,α'-bis[[(methylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



RN 195394-90-2 ZCA
CN 1,3-Benzenediacetonitrile, α,α'-bis[[(butylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)

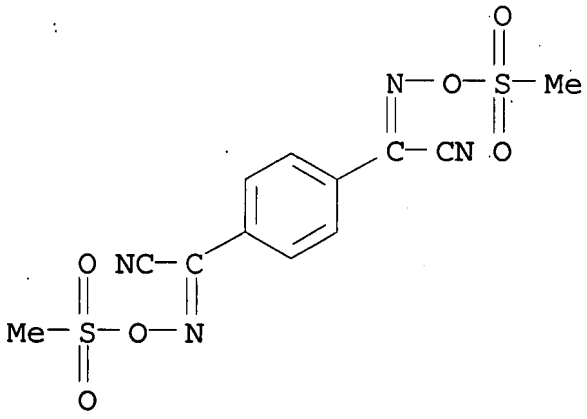


IT **68272-53-7 195394-89-9 195394-90-2**
(chem. amplified resist pattern formation using oxime sulfonate as acid generator)

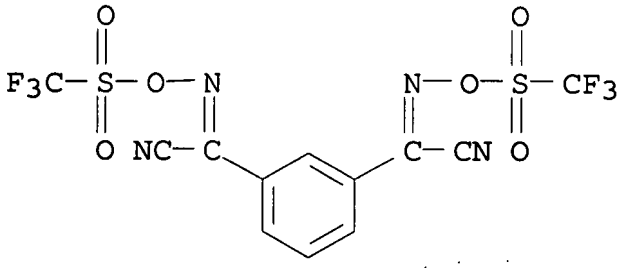
L13 ANSWER 26 OF 27 ZCA COPYRIGHT 2007 ACS on STN
AN 127:255326 ZCA
TI Chemical amplification-type resist composition containing oximesulfonate as acid generator
IN Haneda, Hideo; Sugata, Yoshiki; Yamazaki, Hiroyuki; Komano, Hiroshi
PA Tokyo Ohka Kogyo Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09211846	A	19970815	JP 1996-18008 <--	19960202
	JP 3591743	B2	20041124		
	US 5892095	A	19990406	US 1997-791814 <--	19970130
	US 5973187	A	19991026	US 1998-179818 <--	19981028
	US 5990338	A	19991123	US 1998-179817 <--	19981028
PRAI	JP 1996-18008	A	19960202 <--		
	US 1997-791814	A3	19970130 <--		

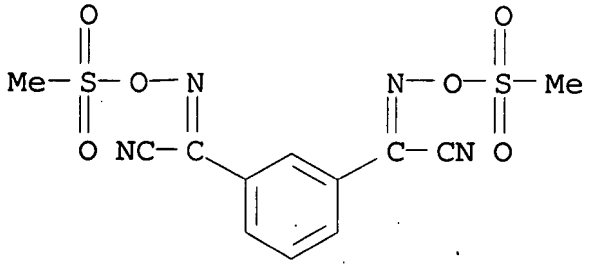
AB The compn. contains a film-forming compd. of which the soly. in alkali changes by acid and an acid generating compd. having 2 or 3 oximesulfonate group RO2SON:C(CN) in a mol. The compd. shows high acid generating ratio, and the compn. gives resist patterns with good dimensional stability and heat resistance.
IT **195394-88-8P 195394-92-4P**
(chem. amplification-type resist compn. contg. oximesulfonate compd. acid generator)
RN 195394-88-8 ZCA
CN 1,4-Benzenediacetonitrile, α,α'-bis[[(methylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



RN 195394-92-4 ZCA
CN 1,3-Benzenediacetonitrile, α,α'-bis[[[(trifluoromethyl)sulfonyl]oxy]imino]- (9CI) (CA INDEX NAME)

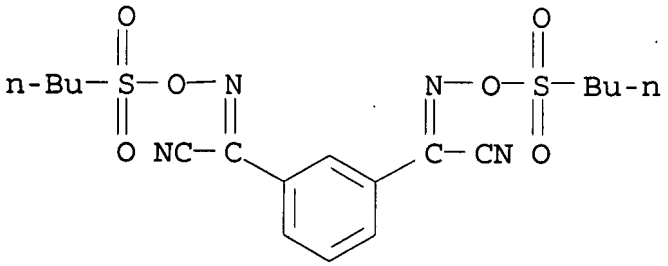


IT **195394-89-9P 195394-90-2P**
(chem. amplification-type resist compn. contg. oximesulfonate compd. acid generator)
RN 195394-89-9 ZCA
CN 1,3-Benzenediacetonitrile, α,α'-bis[[(methylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



RN 195394-90-2 ZCA
CN 1,3-Benzenediacetonitrile, α,α'-

bis[[(butylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



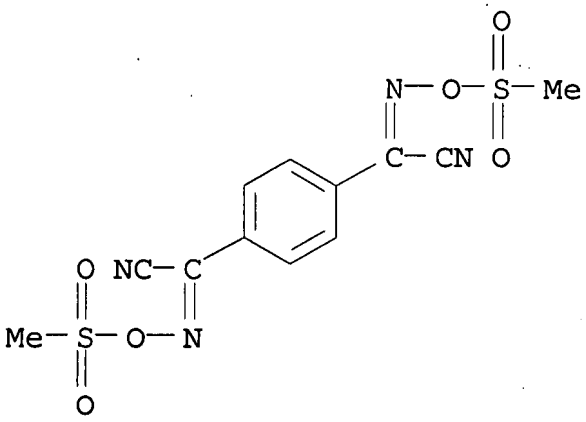
IT **195394-88-8P 195394-92-4P**
(chem. amplification-type resist compn. contg. oximesulfonate compd. acid generator)
IT **195394-89-9P 195394-90-2P**
(chem. amplification-type resist compn. contg. oximesulfonate compd. acid generator)

L13 ANSWER 27 OF 27 ZCA COPYRIGHT 2007 ACS on STN
AN 127:240989 ZCA
TI Oxime sulfonate compound with good heat resistance and acid generator using it for photoresist
IN Haneda, Hideo; Komano, Hiroshi; Nakayama, Toshimasa
PA Tokyo Ohka Kogyo Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

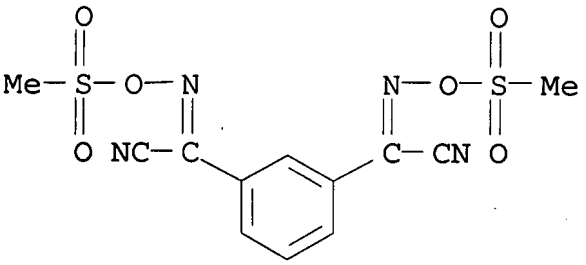
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09208554	A	19970812	JP 1996-18007	19960202 <--
	JP 3798458	B2	20060719		
PRAI	JP 1996-18007		19960202 <--		

OS MARPAT 127:240989
AB The compd. comprises R1O2SON:C(CN)C6H4C(CN):NOSO2R2 [R1-2 = (un)substituted hydrocarbyl]. The acid generator contains the compd. A resist using the acid generator gave patterns with good dimensional stability and heat resistance.
IT **195394-88-8P 195394-89-9P 195394-90-2P 195394-92-4P**
(oxime sulfonate compd. with good heat resistance for acid generator of photoresist)

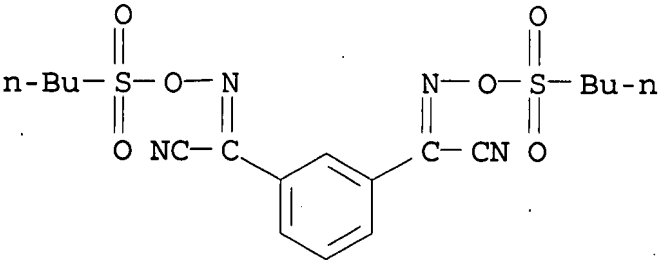
RN 195394-88-8 ZCA
CN 1,4-Benzenediacetonitrile, α,α'-bis[[(methylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



RN 195394-89-9 ZCA
CN 1,3-Benzenediacetonitrile, α,α'-bis[[(methylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)

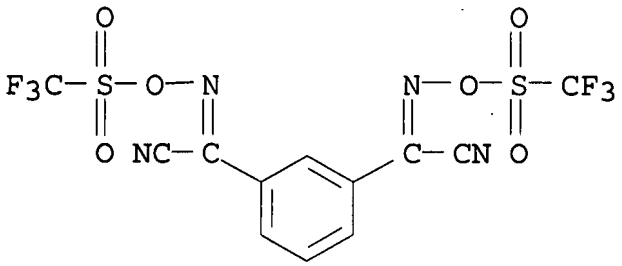


RN 195394-90-2 ZCA
CN 1,3-Benzenediacetonitrile, α,α'-bis[[(butylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



RN 195394-92-4 ZCA
CN 1,3-Benzenediacetonitrile, α,α'-

bis[[[(trifluoromethyl)sulfonyl]oxy]imino]- (9CI) (CA INDEX NAME)



IT **195394-88-8P 195394-89-9P 195394-90-2P**
195394-92-4P
(oxime sulfonate compd. with good heat resistance for acid generator of photoresist)